

*Green Bond Report*  
*2023*

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# 1 Green Bond A: CHF 600 m Senior Green Bond (2019)

## 1.1 Swiss Life Green Bond Framework 2019

In 2019, Swiss Life developed a Green Bond Framework in line with the Green Bond Principles as published by ICMA in June 2018. The Swiss Life Green Bond Framework (the “Framework”) has been reviewed by Sustainalytics<sup>1</sup>, who have confirmed in a Second Party Opinion that the framework is “credible and impactful” and aligns with the four components of the ICMA Green Bond Principles 2018.<sup>2</sup>

In accordance with the Framework, an amount equal to the net proceeds of any Swiss Life Green Bond issuance will be used to finance and/or refinance Eligible Green Assets. Swiss Life considers assets or investments in real estate assets as eligible if they fulfil any of the following criteria:

<b>Building certification</b>	<b>Certification level</b>
Minergie <sup>3</sup>	Minergie, Minergie-P, Minergie-A, Minergie ECO
LEED <sup>4</sup>	Gold or better
BREEAM <sup>5</sup>	Excellent or better
HQE <sup>6</sup>	Excellent or better
<b>Other criteria</b>	
Energy class label <sup>7</sup>	B or better
Share of renewable energy <sup>8</sup>	50% or more
<b>For reconstruction, renovations, refurbishments</b>	
Investments leading to one of the building certifications listed above	
Investments leading to energy class label ‘B’ or better	
Investments explicitly targeting a reduction of greenhouse gas emissions of at least 30%	

<sup>1</sup> <https://www.swisslife.com/en/home/investors/bonds-and-ratings.html>

<sup>2</sup> Use of proceeds, project evaluation/selection, management of proceeds and reporting; The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/assets/Green-Bond-Principles-June-2018-140618-v2.pdf>

<sup>3</sup> [www.minergie.ch](http://www.minergie.ch)

<sup>4</sup> <http://leed.usgbc.org/>

<sup>5</sup> [www.breeam.com/](http://www.breeam.com/)

<sup>6</sup> <https://www.hqegbc.org/>

<sup>7</sup> Swiss Life internal classification based on the Swiss standard SIA 2031:2016. Energy class label ‘A’ corresponds to  $\leq 42$  kWh/m<sup>2</sup> energy reference area; ‘B’ corresponds to 60-42 kWh/m<sup>2</sup> energy reference area

<sup>8</sup> As supplied to the building

## 1.2 Allocation report as of 30.09.2023

On 6 December 2019, Swiss Life issued multi-tranche senior green bonds for a total nominal amount of CHF 600 million.

Bonds	ISIN	Issue date	Maturity date	Nominal amount	Net proceeds at issuance <sup>9</sup>
A Bonds	CH0461238914	06.12.2019	06.03.2029	CHF 150 m	CHF 150 m
B Bonds	CH0461238906	06.12.2019	06.06.2025	CHF 250 m	CHF 249 m
C Bonds	CH0419045809	06.12.2019	06.12.2021	CHF 200 m	CHF 201 m
<b>Total net proceeds outstanding</b>				<b>CHF 600 m</b>	<b>CHF 600 m</b>

The C Bonds in the amount of CHF 200 m have been redeemed in full on 16 December 2021.

In accordance with the Framework, the Green Bond Committee has selected the following pool of assets meeting the eligibility criteria:

### *Allocated assets as of 30.09.2023*

As of 30.09.2023, CHF 600 million of the initial net proceeds of the green bonds listed above have been allocated to eligible Green Assets.

Property	Project type	Total investment (in CHF m)	Building certification	Period of investment	Allocation to Eligible Green Assets (in CHF m)
Zurich, Green City, Maneggplatz 40, 44, 48	Development Residential	35.1	Minergie-P-ECO	2018 (refinancing)	35.1
Zurich, Green City, Maneggplatz 14, 16; Tuchmacherstr. 34, 36, 40, 42	Development Residential	96.0	Minergie-P-ECO	2018 (refinancing)	96.0
Zumikon, Ankenbüel 1-26	Development Residential	116.4	Minergie	2018 (refinancing)	116.4
Massagno, via Lepori 14-18	Development Residential	94.6	Minergie-P-ECO	01.01.2020 - 30.09.2021	52.4
Zurich, Baslerstrasse 71, 73, 75, 77	Development Residential	90.2	Minergie-P-ECO	01.01.2020 - 30.09.2021	77.9
Zurich, Buckhauserstrasse	Development Residential	47.8	Minergie	01.01.2020 - 30.09.2022	43.3
Schaffhausen, Zur Stahlgießerei 3-6	Development Residential	73.1	Minergie	01.01.2020 - 30.09.2023	73.1
Regensdorf, Riedthofstrasse 54-92	Development Residential	49.3	Minergie / Minergie-ECO	01.01.2020 - 30.09.2021	30.0
Lausanne, Av. du Grey 16-24	Renovation Residential	43.3	Minergie	01.01.2020 - 30.09.2023	42.7
Chêne-Bougeries, Chemin de la Montagne 124-134	Renovation Residential	34.9	Minergie	01.01.2020 - 30.09.2023	33.2
<b>Proceeds allocated at 30.09.2023</b>					<b>600.0</b>
Unallocated proceeds					0.0
<b>Total original net proceeds outstanding</b>					<b>600.0</b>

Green Bond A has been fully allocated with proceeds from the allocated Green Assets and the reporting for Green Bond A is herewith completed.

<sup>9</sup> After deduction of commissions, fees and expenses.

Cashflows exceeding the total nominal amount of CHF 600 million have been transferred to Green Bond B. For that purpose, the assets via Lepori in Massagno, Baslerstrasse in Zurich, Buckhauserstrasse in Zurich and Riedhofstrasse in Regensdorf have been re-allocated from Green Bond A to Green Bond B. To avoid double counting of CO<sub>2</sub> savings, a deferral of the avoided GHG emissions has been performed based on the exact allocation periods of these assets to the different Green Bonds.

Investments in the remaining Green Assets allocated to Green Bond A allow to avoid future GHG emissions in the approximate amount of **11.7** kg CO<sub>2</sub> per sqm ERA per year, as compared to benchmark assets<sup>10</sup>, based on the estimated CO<sub>2</sub> emissions of reporting year 2023.

### 1.3 Impact report as of 30.09.2023

With the impact report, Swiss Life intends to estimate the environmental benefits of investments in Eligible Green Assets. For green buildings, the presented data is based on estimates of greenhouse gas (GHG) emissions, expressed in kg of CO<sub>2</sub> per square meter of *allocated* energy reference area (sqm ERA) per year (excluding tenants' electricity). All presented CO<sub>2</sub> emissions are in kg CO<sub>2</sub> equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol and are reviewed and updated in regular intervals to reflect current market standards. Allocated ERA was calculated by multiplying the total ERA of a building with the proportion of total investment that was allocated to the green bonds.

Property	Total investment	Allocated investment	Total ERA	Allocated ERA
	CHF m	CHF m	sqm	sqm
Zurich, Green City, Maneggplatz 40, 44, 48	35.1	35.1	6'690	6'690
Zurich, Green City, Maneggplatz 14, 16; Tuchmacherstr. 34, 36, 40, 42	96.0	96.0	18'253	18'253
Zumikon, Ankenbüel 1-26	116.4	116.4	18'337	18'337
Massagno, via Lepori 14-18	94.6	52.4	16'248	9'010
Zurich, Baslerstrasse 71, 73, 75, 77	90.2	77.9	21'900	18'909
Zurich, Buckhauserstrasse	47.8	43.3	13'560	12'269
Schaffhausen, Zur Stahlgießerei 3-6	73.1	73.1	20'848	20'848
Regensdorf, Riedthofstrasse 54-92	49.3	30.0	13'988	8'508
<b>Total acquisitions/developments</b>				<b>112'824</b>
Lausanne, Av. du Grey 16-24	43.3	42.7	29'151	28'742
Chêne-Bougeries, Chemin de la Montagne 124-134	34.9	33.2	40'670	38'704
<b>Total renovations/refurbishments</b>				<b>67'446</b>

<sup>10</sup> Benchmark source: pom+, period 2022 (see further details below)

*Acquisitions and developments: GHG emissions<sup>11</sup> avoided*

Property	Yearly GHG emissions of the object	Yearly GHG emissions of benchmark	Yearly GHG emissions avoided
	kg CO <sub>2</sub> / allocated sqm ERA / year		
Zurich, Green City, Maneggplatz 40, 44, 48	1.5	15.2	-13.7
Zurich, Green City, Maneggplatz 14, 16; Tuchmacherstr. 34, 36, 40, 42	1.3	15.2	-13.9
Zumikon, Ankenbüel 1-26	1.8	15.2	-13.4
Massagno, via Lepori 14-18	7.0	15.2	-8.2
Zurich, Baslerstrasse 71, 73, 75, 77	7.0	15.2	-8.2
Zurich, Buckhauserstrasse	7.0	15.2	-8.2
Schaffhausen, Zur Stahlgiesserei 3-6	1.6	15.2	-13.7
Regensdorf, Riedthofstrasse 54-92	7.0	15.2	-8.2
<b>Weighted average</b>			<b>-11.3</b>

Investments in green buildings allocated to the bonds allow to avoid GHG emissions in the approximate amount of **11.3** kg CO<sub>2</sub> per sqm ERA per year, as compared to benchmark assets<sup>12</sup>.

*Renovations and refurbishments: Reduction of GHG emissions<sup>6</sup>*

Property	GHG emissions after renovation	GHG emissions before renovation	Reduction of GHG emissions	
	kg CO <sub>2</sub> / allocated sqm ERA / year			
Lausanne, Av. du Grey 16-24	7.0	4.6	2.4	51%
Chêne-Bougeries, Chemin de la Montagne 124-134	7.6	26.5	-18.9	-71%
<b>Weighted average</b>			<b>-9.8</b>	

The impact of renovations and/or refurbishments led to a reduction of GHG emissions in the approximate amount of **9.8** kg CO<sub>2</sub> per sqm ERA per year, as compared with emissions before renovation.

The categories acquisitions/developments and renovations/refurbishments combined achieve a GHG avoidance (or reduction) of approximately **10.8** kg CO<sub>2</sub> per sqm ERA per year. Since issuance of the bond on 6.12.2019 until the reporting date 30.09.2023, estimated GHG emissions avoided add up to around **6'613** tons CO<sub>2</sub>. This represents GHG savings of **11.0** tons CO<sub>2</sub> per million invested (allocated) Swiss Francs.<sup>13</sup>

*Methodology*

Estimation of GHG emissions of objects in the portfolio

The amount of yearly GHG emissions (measured in kg CO<sub>2</sub> per sqm ERA per year and excluding tenants' electricity) was derived from the most recent annual cost bill of the respective asset, when available. For assets for which a cost bill was not yet available, adjusted object plan data was used to estimate GHG emissions. To ensure sufficient reliability, plan data was adjusted by applying 20%

<sup>11</sup> Excluding tenants' electricity. All presented CO<sub>2</sub> emissions are in kg CO<sub>2</sub> equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol

<sup>12</sup> Benchmark source: pom+, 2022 (see further details below)

<sup>13</sup> Increase in estimated GHG emissions avoided and GHG savings in relation to the 2022 Green Bond Report is partially due to an ERA understatement of the renovations and/or refurbishments assets in Lausanne and Chêne- Bougeries in the previous years.

additional emissions and a minimum yearly GHG emission of 7.0 kg CO<sub>2</sub> per sqm ERA was applied for residential objects in Switzerland<sup>14</sup> and 4.9 kg CO<sub>2</sub> per sqm ERA for office buildings in France<sup>15</sup>.

#### Estimation of GHG emission avoidance/reduction

GHG emission savings following acquisitions and developments were calculated by comparing yearly GHG emissions of each object to a relevant benchmark (see below).

GHG emission savings following renovations/refurbishments were calculated by comparing yearly GHG emissions of each object before renovation (annual cost bill) and after renovation (annual cost bill or adjusted plan data).

Total GHG emission avoidance/reduction since issuance was calculated *pro rata temporis* for each object, depending on the allocation date.

Object type	Assumed allocation date	Estimation source
Zurich, Green City, Maneggplatz 40, 44, 48	06.12.2019	Annual Cost Bill
Zurich, Green City, Maneggplatz 14, 16; Tuchmacherstr. 34, 36, 40, 42	06.12.2019	Annual Cost Bill
Zumikon, Ankenbüel 1-26	06.12.2019	Annual Cost Bill
Massagno, via Lepori 14-18	01.01.2020	Adjusted plan data
Zurich, Baslerstrasse 71, 73, 75, 77	01.01.2020	Adjusted plan data
Zurich, Buckhauserstrasse	01.01.2020	Adjusted plan data
Schaffhausen, Zur Stahlgiesserei 3-6	01.01.2020	Annual Cost Bill
Regensdorf, Riedthofstrasse 54-92	01.01.2020	Adjusted plan data
Lausanne, Av. du Grey 16-24	01.01.2020	Adjusted plan data
Chêne-Bougeries, Chemin de la Montagne 124-134	01.01.2020	Adjusted plan data

#### Benchmark for acquisitions and developments

Swiss Life mandated the consulting company pom+ Consulting AG in 2023 to elaborate appropriate benchmarks to compare with objects allocated to the green bonds. Benchmarks were elaborated separately for the main categories residential, commercial and mixed and all only contain Swiss real estate objects.

Object type	Period considered	Number of objects
Residential	2022	7'449
Commercial	2022	2'760
Mixed	2022	1'118

According to Swiss law (Ordinance on Collective Investment Schemes<sup>16</sup>) following inclusion criteria are relevant to distinguish between the three categories:

- Residential: At least 80% of income from residential element
- Commercial: At least 60% of income from commercial element
- Mixed: Between 20-60% of income from commercial element

<sup>14</sup> TEP - [Kriterien für Klimaverträgliche Gebäudefinanzierung in der Schweiz](#)

<sup>15</sup> [Real Estate ESG Index - Environmental performance in Europe \(index-esg.com\)](#)

<sup>16</sup> Art. 86, para. 2: <https://www.admin.ch/opc/en/classified-compilation/20062920/index.html>

## 1.4 Selected assets



Object	Green City, Maneggplatz 40/44/48, 8041 Zurich
Construction year	2018
Label	Minergie-P-ECO



Object	Ankenbüel 1-26, 8126 Zumikon
Construction year	2018
Label	Minergie



Object	Via Lepori 14-18, Massagno
Construction year	2017-2021
Label	Minergie-P-Eco



Object	Baslerstrasse 71, Zurich
Construction year	2018-2022
Label	Minergie-P-ECO



Object	Buckhauserstrasse, Zurich
Construction year	2020-2022
Label	Minergie



Object	Zur Stahlgesserei 3-6, Schaffhausen
Construction year	2020-2021
Label	Minergie





Object	Riedthofstrasse 54-92, Regensdorf
Construction year	2020-2022
Label	Minergie Standard / Minergie-ECO



Object	Av. du Grey 16-24, Lausanne
Construction year	2019-2023
Label	Minergie



Object	Chemin de la Montagne 124-134, Chêne Bougeries
Construction year	2019-2021
Label	Minergie Standard / Minergie-ECO

## 2 Green Bond B: EUR 600m Senior Green Bond (2021)

### 2.1 Swiss Life Green Bond Framework 2021

In 2021, Swiss Life updated its Green Bond Framework in line with the Green Bond Principles as published by ICMA in June 2021. The Swiss Life Green Bond Framework (the “Framework”) has been reviewed by Sustainalytics<sup>17</sup>, who have confirmed in a Second Party Opinion that the framework is “credible and impactful” and aligns with the four components of the ICMA Green Bond Principles 2021.<sup>18</sup>

In accordance with the Framework, an amount equal to the net proceeds of any Swiss Life Green Bond issuance will be used to finance and/or refinance Eligible Green Assets. Swiss Life considers assets or investments in real estate assets as eligible if they fulfil any of the following criteria:

Building certification	Certification level
Minergie <sup>19</sup>	Minergie, Minergie-P, Minergie-A, Minergie ECO
LEED <sup>20</sup>	Gold or better
BREEAM <sup>21</sup>	Excellent or better
HQE <sup>22</sup>	Excellent or better

Other criteria	
Energy class label <sup>23</sup>	B or better

For redevelopments, reconstruction, renovations, refurbishments
Investments leading to one of the building certifications listed above
Investments leading to energy class label B or better
Investments explicitly targeting a reduction of greenhouse gas emissions of at least 30%

<sup>17</sup> <https://www.swisslife.com/en/home/investors/bonds-and-ratings.html>

<sup>18</sup> Use of proceeds, project evaluation/selection, management of proceeds and reporting; The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

<sup>19</sup> [www.minergie.ch](http://www.minergie.ch)

<sup>20</sup> <http://leed.usgbc.org/>

<sup>21</sup> [www.breeam.com/](http://www.breeam.com/)

<sup>22</sup> <https://www.hqegbc.org/>

<sup>23</sup> Swiss Life internal classification based on the Swiss standard SIA 2031:2016. Energy class label ‘A’ corresponds to ≤ 42 kWh/m<sup>2</sup> energy reference area; ‘B’ corresponds to 60-42 kWh/m<sup>2</sup> energy reference area

## 2.2 Allocation report as of 30.09.2023

On 15 September 2021, Swiss Life issued a single-tranche senior green bond for a total nominal amount of EUR 600 million.

ISIN	Issue date	Maturity date	Nominal amount	Net proceeds at issuance <sup>24</sup>
CH1130818847	15.09.2021	15.09.2031	EUR 600 m	EUR 594 m
<b>Total net proceeds outstanding</b>			<b>EUR 600 m</b>	<b>EUR 594 m</b>

In accordance with the Framework, the Green Bond Committee has selected the following pool of assets meeting the eligibility criteria:

### *Allocated assets as of 30.09.2023*

As of 30.09.2023, CHF 343.8 million of the outstanding net proceeds of the green bonds listed above have been allocated to eligible Green Assets.

Property	Project type	Total investment (in CHF m)	Building certification	Period of investment	Allocation to Eligible Green Assets (in CHF m)
Massagno, via Lepori 14-18	Development Residential	94.6	Minergie-P-ECO	01.10.2021 - 30.09.2023	0.7
Esslingen, Löwenstrasse 7-17	Development Residential	48.2	Minergie	15.09.2019 - 30.09.2023	1.4
Zurich, Manegg West, Allmendstr. / Spindelstr.	Development Residential	162.0	Minergie P	15.09.2019 - 30.09.2023	26.5
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	Development Residential	151.5	Minergie P	15.09.2019 - 30.09.2023	99.0
Zurich, Baslerstrasse 71, 73, 75, 77	Development Residential	90.2	Minergie-P-ECO	01.10.2021 - 30.09.2023	4.7
Zurich, Buckhauserstrasse	Development Residential	47.8	Minergie	01.10.2022 - 30.09.2023	4.1
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	Development Mixed	44.2	Minergie	15.09.2019 - 30.09.2023	31.9
Regensdorf, Riedthofstrasse 54-92	Development Residential	49.3	Minergie / Minergie-ECO	01.10.2021 - 30.09.2023	17.4
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	Development Residential	51.2	Minergie P-Eco / SMEO	15.09.2019 - 30.09.2023	48.6
Zurich, Allenmoosstrasse 30 + 32	Development Residential	11.8	Energy Label B	15.09.2019 - 30.09.2023	7.3
Zurich, Allenmoosstrasse 52 - 62	Development Residential	29.7	Energy Label B	15.09.2019 - 30.09.2023	14.2
Zurich, Balgriststrasse 60 / 62	Development Residential	14.8	Energy Label A	15.09.2019 - 30.09.2023	6.9
Espalinges, Chemin des Croisettes	Renovation Residential	114.4	SNBS Gold / Minergie P Eco	15.09.2019 - 30.09.2023	1.0
La Défense (France), Bellini, Puteaux-La Défense	Development Commercial	195.8	HQE Excellent BREEAM Excellent BBC Effinergie+ Wirescore (Gold)	15.09.2019 - 30.09.2023	80.1
<b>Proceeds allocated at 30.09.2023</b>					<b>343.8</b>
Unallocated proceeds					256.2
<b>Total original net proceeds outstanding</b>					<b>600.0</b>

<sup>24</sup> After deduction of commissions, fees and expenses.

In addition to the four green assets (via Lepori in Massagno, Baslerstrasse in Zurich, Buckhauserstrasse in Zurich and Riedhofstrasse in Regensdorf), that have been re-allocated from Green Bond A to Green Bond B, an additional four eligible green real estate projects have been allocated to the Green Bond B selected assets in accordance with the Swiss Life Green Bond Framework:

- Allenmoosstrasse 30 / 32 in Zurich
- Allenmoosstrasse 52-62 in Zurich
- Balgriststrasse 60 / 62 in Zurich
- Chemin des Croisettes in Espalinges

## 2.3 Impact report as of 30.09.2023

The impact report of Green Bond B follows the same guidelines as outlined in Section [Impact Report of Green Bond A](#) of this Green Bond Report to estimate the environmental benefits of investments in Eligible Green assets.

Property	Total investment	Allocated investment	Total ERA	Allocated ERA
	CHF m	CHF m	sqm	sqm
Massagno, Via Lepori 14-18	94.6	0.7	16'248	122
Esslingen, Löwenstrasse 7-17	48.2	1.4	8'689	258
Zurich, Manegg West, Allmendstr. / Spindelstr.	162.0	26.5	25'924	4'241
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	151.5	99.0	23'103	15'092
Zurich, Baslerstrasse 71, 73, 75, 77	90.2	4.7	21'900	1'142
Zurich, Buckhauserstrasse	47.8	4.1	13'560	1'159
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	44.2	31.9	7'338	5'300
Regensdorf, Riedthofstrasse 54-92	49.3	17.4	13'988	4'931
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	51.2	48.6	13'849	13'140
Zurich, Allenmoosstrasse 30 + 32	11.8	7.3	2'325	1'447
Zurich, Allenmoosstrasse 52 - 62	29.7	14.2	7'377	3'523
Zurich, Balgriststrasse 60 / 62	14.8	6.9	2'047	959
La Défense (France), Bellini, Puteaux-La Défense	0.0	0.0	19'452	7'960
<b>Total acquisitions/developments</b>				<b>59'272</b>
Espalinges, Chemin des Croisettes	114.4	1.0	17'248	148
<b>Total renovations/refurbishments</b>				<b>148</b>

*Acquisitions and developments: GHG emissions<sup>25</sup> avoided*

Property	Yearly GHG emissions of the object	Yearly GHG emissions of benchmark	Yearly GHG emissions avoided
	kg CO <sub>2</sub> / allocated sqm ERA / year		
Massagno, Via Lepori 14-18	7.0	15.2	-8.2
Esslingen, Löwenstrasse 7-17	0.5	15.2	-14.7
Zurich, Manegg West, Allmendstr. / Spindelstr.	7.0	15.2	-8.2
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	7.0	15.2	-8.2
Zurich, Baslerstrasse 71, 73, 75, 77	7.0	15.2	-8.2
Zurich, Buckhauserstrasse	7.0	15.2	-8.2
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	7.0	15.2	-8.2
Regensdorf, Riedthofstrasse 54-92	7.0	15.2	-8.2
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	7.0	12.6	-5.6
Zurich, Allenmoosstrasse 30 + 32	7.0	15.2	-8.2
Zurich, Allenmoosstrasse 52 - 62	7.0	15.2	-8.2
Zurich, Balgriststrasse 60 / 62	7.0	15.2	-8.2
La Défense (France), Bellini, Puteaux-La Défense	4.9	10.3	-5.4
<b>Weighted average</b>			<b>-7.3</b>

Investments in green buildings allocated to the bonds allow to avoid GHG emissions in the approximate amount of **7.3** kg CO<sub>2</sub> per sqm ERA per year, as compared to benchmark assets<sup>26</sup>.

*Renovations and refurbishments: Reduction of GHG emissions<sup>6</sup>*

Property	GHG emissions after renovation	GHG emissions before renovation	Reduction of GHG emissions	
	kg CO <sub>2</sub> / allocated sqm ERA / year			
Espalinges, Chemin des Croisettes	7.0	34.5	-27.5	-80%
<b>Weighted average</b>			<b>-27.5</b>	

The impact of renovations and/or refurbishments led to a reduction of GHG emissions in the approximate amount of **27.5** kg CO<sub>2</sub> per sqm ERA per year, as compared with emissions before renovation.

The categories acquisitions/developments and renovations/refurbishments combined achieve a GHG avoidance (or reduction) of approximately **7.4** kg CO<sub>2</sub> per sqm ERA per year. Since issuance of the bond on 15.09.2021 until the reporting date 30.09.2023, estimated GHG emissions avoided add up to around **880** tons CO<sub>2</sub>. This represents GHG savings of **2.6** tons CO<sub>2</sub> per million invested (allocated) Swiss Francs.

*Methodology*

Estimation of GHG emissions of objects in the portfolio and GHG emission avoidance/reduction

For the estimation of GHG emissions of objects in the portfolio and the estimation of GHG emission avoidance/reduction the same methodology as outlined in Section [Impact Report of Green Bond A](#) of this Green Bond Report is applied to all Swiss Life Green Bonds.

<sup>25</sup> Excluding tenants' electricity. All presented CO<sub>2</sub> emissions are in kg CO<sub>2</sub> equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol

<sup>26</sup> Benchmark source: pom+, period 2022, and Deepki ESG Index, period 2023 (see further details below)

### Conversion of EUR investments

In addition to the assets in Switzerland, Green Bond B contains one allocated asset located in France with investment cash flows measured in EUR. For the calculation of the total allocated proceeds the investment cash flows were converted from EUR to CHF as per 30.09.2023 (exchange rate 0.9674 EUR/CHF).

Total GHG emission avoidance/reduction since issuance was calculated *pro rata temporis* for each object, depending on the allocation date.

Object type	Assumed allocation date	Estimation source
Massagno, Via Lepori 14-18	01.10.2021	Adjusted plan data
Esslingen, Löwenstrasse 7-17	15.09.2021	Annual Cost Bill
Zurich, Manegg West, Allmendstr. / Spindelstr.	15.09.2021	Adjusted plan data
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	15.09.2021	Adjusted plan data
Zurich, Baslerstrasse 71, 73, 75, 77	01.10.2021	Adjusted plan data
Zurich, Buckhauserstrasse	01.10.2022	Adjusted plan data
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	15.09.2021	Adjusted plan data
Regensdorf, Riedthofstrasse 54-92	01.10.2021	Adjusted plan data
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	15.09.2021	Adjusted plan data
Zurich, Allenmoosstrasse 30 + 32	18.08.2023	Adjusted plan data
Zurich, Allenmoosstrasse 52 - 62	18.08.2023	Adjusted plan data
Zurich, Balgriststrasse 60 / 62	18.08.2023	Adjusted plan data
Espalinges, Chemin des Croisettes	18.08.2023	Adjusted plan data
La Défense (France), Bellini, Puteaux-La Défense	15.09.2021	Adjusted plan data

### Benchmark for acquisitions and developments

For the allocated objects, which are located in Switzerland, the benchmarks from the consulting company pom+ Consulting AG as outlined in Section [Impact Report of Green Bond A](#) of this Green Bond Report were applied to calculate the GHG emissions avoided.


For the allocated object, which is located in France, Swiss Life reverted to the 2023 Deepki ESG Index<sup>27</sup> to compare with objects allocated to the green bonds. Benchmarks are based on actual consumption data and were elaborated separately for the main categories Logistic, Office, Housing, Hotel, Health and Retail.

Object type	Period considered	Number of objects
Logistic	2023	Total of over 30'000 buildings
Office	2023	
Housing	2023	
Hotel	2023	
Health	2023	
Retail	2023	

<sup>27</sup> [Real Estate ESG Index - Environmental performance in Europe \(index-esg.com\)](#)




## 2.4 Selected assets




Object	Via Lepori 14-18, Massagno
Construction year	2017-2021
Label	Minergie-P-Eco




Object	Löwenstrasse 7-17, Esslingen
Construction year	2016-2018
Label	Minergie




Object	Manegg West Allmendstr. / Spindelstr., Zürich
Construction year	2017-2020 / 2022-2024
Label	Minergie P



Object	KIM, Sulzerallee 72-78, Solarstrasse 1-9, Winterthur
Construction year	2019-2022
Label	Minergie P



Object	Baslerstrasse 71, Zurich
Construction year	2018-2022
Label	Minergie-P-ECO



Object	Buckhauserstrasse, Zurich
Construction year	2020-2022
Label	Minergie



Object	Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d, Geneva
Construction year	2020-2022
Label	Minergie P



Object	Riedthofstrasse 54-92, Regensdorf
Construction year	2020-2022
Label	Minergie / Minergie-ECO



Object	Plaine du Loup, Route Plaines-du-Loup 55, Lausanne
Construction year	2021-2023
Label	Minergie P-Eco / SMEO



Object	Allenmoosstrasse 30 + 35, Zürich
Construction year	2022-2024
Label	Energy Label B



Object	Allenmoosstrasse 52-62 Zürich
Construction year	2022-2024
Label	Energy Label B



Object	Balgriststrasse 60/62, Zürich
Construction year	2022-2024
Label	Energy Label B





Object	Projet Ruban, Chemin des Croisettes, Espalinges
Construction year	2024-2026
Label	SNBS Gold / Minergie P Eco



Object	Bellini, Puteaux – La Défense, FR
Construction year	2020-2022
Label	HQE, BEEAM, BBC Effinergie+, Wirescore

### 3 Consolidated impact report as of 30.09.2023

The consolidated impact report displays Swiss Life`s estimated total environmental benefits of investments in Eligible Green Assets.

#### *Acquisitions and developments: GHG emissions<sup>28</sup> avoided*

Green Bond	Yearly GHG emissions avoided
Green Bond A: CHF 600m Senior Green Bond (2019)	-11.3
Green Bond B: EUR 600m Senior Green Bond (2021)	-7.3
<b>Weighted average</b>	<b>-9.9</b>

Investments in green buildings allocated to the bonds allow to avoid GHG emissions in the approximate amount of **9.9** kg CO<sub>2</sub> per sqm ERA per year, as compared to benchmark assets<sup>29</sup>.

#### *Renovations and refurbishments: Reduction of GHG emissions<sup>13</sup>*

Green Bond	Reduction of GHG emissions
Green Bond A: CHF 600m Senior Green Bond (2019)	-9.8
Green Bond B: EUR 600m Senior Green Bond (2021)	-27.5
<b>Weighted average</b>	<b>-9.9</b>

The impact of renovations and/or refurbishments led to a reduction of GHG emissions in the approximate amount of **9.9** kg CO<sub>2</sub> per sqm ERA per year, as compared with emissions before renovation.

The categories acquisitions/developments and renovations/refurbishments combined achieve a total GHG avoidance (or reduction) of approximately **9.9** kg CO<sub>2</sub> per sqm ERA per year. Since issuance of the bonds on 06.12.2019 and 15.09.2021 until the reporting date 30.09.2023, estimated GHG emissions avoided add up to around **7'492** tons CO<sub>2</sub>. This represents GHG savings of **7.9** tons CO<sub>2</sub> per million invested (allocated) Swiss Francs.

<sup>28</sup> Excluding tenants' electricity. All presented CO<sub>2</sub> emissions are in kg CO<sub>2</sub> equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol

<sup>29</sup> Benchmark source: pom+, period 2022, and OID (Green Building Observatory), 2021