

Green Bond Report
2022

Table of content

1	Green Bond A: CHF 600 m Senior Green Bond (2019).....	3
1.1	Swiss Life Green Bond Framework 2019.....	3
1.2	Allocation report as of 30.09.2022	4
1.3	Impact report as of 30.09.2022	5
1.4	Selected assets.....	8
2	Green Bond B: EUR 600m Senior Green Bond (2021)	10
2.1	Swiss Life Green Bond Framework 2021.....	10
2.2	Allocation report as of 30.09.2022	11
2.3	Impact report as of 30.09.2022	12
2.4	Selected assets.....	14
3	Consolidated impact report as of 30.09.2022	15

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 Sustainalytics¹, 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 2018.²

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 ³	Minergie, Minergie-P, Minergie-A, Minergie ECO
LEED ⁴	Gold or better
BREEAM ⁵	Excellent or better
HQE ⁶	Excellent or better
Other criteria	
Energy class label ⁷	B or better
Share of renewable energy ⁸	50% or more
For 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%	

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

² 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>

³ www.minergie.ch

⁴ <http://leed.usgbc.org/>

⁵ www.breeam.com/

⁶ www.behqe.com/

⁷ Swiss Life internal classification based on the Swiss standard SIA 2031:2016. Energy class label ‘A’ corresponds to ≤ 42 kWh/m² energy reference area; ‘B’ corresponds to 60-42 kWh/m² energy reference area

⁸ As supplied to the building

1.2 Allocation report as of 30.09.2022

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 ⁹
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
Total net proceeds outstanding				CHF 600 m	CHF 600 m

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 30.09.2022

As of 30.09.2022, CHF 594 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	94.5	Minergie-P-ECO	01.01.2020 - 30.09.2022	53.1
Zurich, Baslerstrasse 71, 73, 75, 77	Development Residential	90.5	Minergie-P-ECO	01.01.2020 - 30.09.2022	82.1
Zurich, Buckhauserstrasse	Development Residential	48.2	Minergie	01.01.2020 - 30.09.2022	41.6
Schaffhausen, Zur Stahlgiesserei 3-6	Development Residential	73.1	Minergie	01.01.2020 - 30.09.2022	73.1
Regensdorf, Riedthofstrasse 54-92	Development Residential	49.3	Minergie / Minergie-ECO	01.01.2020 - 30.09.2022	40.7
Lausanne, Av. du Grey 16-24	Renovation Residential	43.2	Minergie	01.01.2020 - 30.09.2022	40.4
Chêne-Bougeries, Chemin de la Montagne 124-134	Renovation Residential	34.0	Minergie	01.01.2020 - 30.09.2022	15.5
Proceeds allocated at 30.09.2022					594.1
Unallocated proceeds					5.9
Total original net proceeds outstanding					600.0

⁹ After deduction of commissions, fees and expenses.

1.3 Impact report as of 30.09.2022

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 CO₂ per square meter of *allocated* energy reference area (sqm ERA) per year (excluding tenants' electricity). All presented CO₂ emissions are in kg CO₂ equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol. 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	13'489	13'489
Zumikon, Ankenbüel 1-26	116.4	116.4	18'336	18'336
Massagno, via Lepori 14-18	94.5	53.1	14'966	8'409
Zurich, Baslerstrasse 71, 73, 75, 77	90.5	82.1	19'385	17'588
Zurich, Buckhauserstrasse	48.2	41.6	12'916	11'141
Schaffhausen, Zur Stahlgießerei 3-6	73.1	73.1	14'598	14'598
Regensdorf, Riedthofstrasse 54-92	49.3	40.7	13'060	10'805
Total acquisitions/developments				101'056
Lausanne, Av. du Grey 16-24	43.2	40.4	9'352	8'754
Chêne-Bougeries, Chemin de la Montagne 124-134	34.0	15.5	12'747	5'821
Total renovations/refurbishments				14'575

Acquisitions and developments: GHG emissions¹⁰ avoided

Property	Yearly GHG emissions of the object	Yearly GHG emissions of benchmark	Yearly GHG emissions avoided
	kg CO ₂ / allocated sqm ERA / year		
Zurich, Green City, Maneggplatz 40, 44, 48	8.9	19.6	-10.7
Zurich, Green City, Maneggplatz 14, 16; Tuchmacherstr. 34, 36, 40, 42	7.4	19.6	-12.2
Zumikon, Ankenbüel 1-26	11.6	19.6	-8.0
Massagno, via Lepori 14-18	7.0	19.6	-12.6
Zurich, Baslerstrasse 71, 73, 75, 77	7.0	19.6	-12.6
Zurich, Buckhauserstrasse	7.0	19.6	-12.6
Schaffhausen, Zur Stahlgießerei 3-6	12.1	19.6	-7.5
Regensdorf, Riedthofstrasse 54-92	7.0	19.6	-12.6
Weighted average			-10.9

Investments in green buildings allocated to the bonds allow to avoid GHG emissions in the approximate amount of **10.9** kg CO₂ per sqm ERA per year, as compared to benchmark assets¹¹.

¹⁰ Excluding tenants' electricity. All presented CO₂ emissions are in kg CO₂ equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol

¹¹ Benchmark source: pom+, period 2019-2021 (see further details below)

Renovations and refurbishments: Reduction of GHG emissions⁶

Property	GHG emissions after renovation	GHG emissions before renovation	Reduction of GHG emissions	
	kg CO ₂ / allocated sqm ERA / year			
Lausanne, Av. du Grey 16-24	7.4	15.6	-8.3	-53%
Chêne-Bougeries, Chemin de la Montagne	13.8	32.5	-18.6	-57%
Weighted average			-12.4	

The impact of renovations and/or refurbishments led to reduction of GHG emissions in the approximate amount of **12.4** kg CO₂ 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 **11.0** kg CO₂ per sqm ERA per year. Since issuance of the bond on 6.12.2019 until the reporting date 30.09.2022, estimated GHG emissions avoided add up to around **3'537** tons CO₂. This represents GHG savings of **6.0** tons CO₂ per million invested (allocated) Swiss Francs.

Methodology

Estimation of GHG emissions of objects in the portfolio

The amount of yearly GHG emissions (measured in kg CO₂ 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% additional emissions.

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, Buckhauerstrasse	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 2022 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	2019 - 2021	4'307
Commercial	2019 - 2021	1'195
Mixed	2019 - 2021	832

According to Swiss law (Ordinance on Collective Investment Schemes ¹²) 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

¹² 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	2017-2020
Label	Minergie-P-Eco



Object	Baslerstrasse 71, Zurich
Construction year	2019-2022
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	2019-2022
Label	Minergie



Object	Chemin de la Montagne 124-134, Chêne Bougeries
Construction year	2020-2022
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 Sustainalytics¹³, 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 2021.¹⁴

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 ¹⁵	Minergie, Minergie-P, Minergie-A, Minergie ECO
LEED ¹⁶	Gold or better
BREEAM ¹⁷	Excellent or better
HQE ¹⁸	Excellent or better

Other criteria	
Energy class label ¹⁹	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%

¹³ <https://www.swisslife.com/en/home/investors/bonds-and-ratings.html>

¹⁴ 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/>

¹⁵ www.minergie.ch

¹⁶ <http://leed.usgbc.org/>

¹⁷ www.breeam.com/

¹⁸ www.behqe.com/

¹⁹ Swiss Life internal classification based on the Swiss standard SIA 2031:2016. Energy class label ‘A’ corresponds to ≤ 42 kwh/m² energy reference area; ‘B’ corresponds to 60-42 kwh/m² energy reference area

2.2 Allocation report as of 30.09.2022

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 ²⁰
CH1130818847	15.09.2021	15.09.2031	EUR 600 m	EUR 594 m
Total net proceeds outstanding			EUR 600 m	EUR 594 m

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

Allocated assets as of 30.09.2022

As of 30.09.2022, CHF 270 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)
Esslingen, Löwenstrasse 7-17	Development Residential	48.3	Minergie	15.09.2019 - 30.09.2022	48.3
Zurich, Manegg West, Allmendstr. / Spindelstr.	Development Residential	162.0	Minergie P	15.09.2019 - 30.09.2022	-
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	Development Residential	151.5	Minergie P	15.09.2019 - 30.09.2022	97.4
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	Development Mixed	44.2	Minergie	15.09.2019 - 30.09.2022	21.9
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	Development Residential	50.2	Minergie P-Eco / SMEO	15.09.2019 - 30.09.2022	46.8
La Défense (France), Bellini, Puteaux-La Défense	Development Commercial	194.9	HQE Excellent BREEAM Excellent BBC Effinergie+ Wirescore (Gold)	15.09.2019 - 30.09.2022	56.0
Proceeds allocated at 30.09.2022					270.4
Unallocated proceeds					329.6
Total original net proceeds outstanding					600.0

²⁰ After deduction of commissions, fees and expenses.

2.3 Impact report as of 30.09.2022

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
Esslingen, Löwenstrasse 7-17	48.3	1.5	8'689	268
Zurich, Manegg West, Allmendstr. / Spindelstr.	162.0	0.0	-	-
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	151.5	97.4	22'669	14'579
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	44.2	21.9	7'338	3'646
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	50.2	46.8	4'203	3'921
La Défense (France), Bellini, Puteaux-La Défense	194.9	56.0	19'452	5'585
Total acquisitions/developments				27'999

Acquisitions and developments: GHG emissions²¹ avoided

Property	Yearly GHG emissions of the object	Yearly GHG emissions of benchmark	Yearly GHG emissions avoided
	kg CO ₂ / allocated sqm ERA / year		
Esslingen, Löwenstrasse 7-17	5.5	19.6	-14.1
Zurich, Manegg West, Allmendstr. / Spindelstr.	n/a	19.6	n/a
Winterthur, KIM, Sulzerallee 72-78, Solarstrasse 1-9	7.0	19.6	-12.6
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	7.0	16.4	-9.4
Lausanne, Plaine du Loup / PU A+B, Route des Plaines-du-Loup 55, Rue Edith-Berger 4, 6, 8	7.0	19.6	-12.6
La Défense (France), Bellini, Puteaux-La Défense	7.3	14.0	-6.7
Weighted average			-11.0

Investments in green buildings allocated to the bonds allow to avoid GHG emissions in the approximate amount of **11.0** kg CO₂ per sqm ERA per year, as compared to benchmark assets²².

Since issuance of the bond on 15.09.2021 until the reporting date 30.09.2022, estimated GHG emissions avoided add up to around **321** tons CO₂. This represents GHG savings of **1.4** tons CO₂ 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.

²¹ Excluding tenants' electricity. All presented CO₂ emissions are in kg CO₂ equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol

²² Benchmark source: pom+, period 2019-2021, and OID (Green Building Observatory), 2021 (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 30.06.2022 (exchange rate 0.9631 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
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
Genf, Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d	15.09.2021	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
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 2021 Energy Efficiency Barometer for Buildings report from OID (Green Building Observatory) to compare with objects allocated to the green bonds. Benchmarks were elaborated separately for the main categories offices, shopping centres, residential and logistics and all only contain French real estate objects.

Object type	Period considered	Number of objects
Offices	2021	Total of 23'300 buildings
Shopping Centers	2021	
Residential	2021	
Logistics	2021	


2.4 Selected assets




Object	Löwenstrasse 7-17, Esslingen
Construction year	2016-2017
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	Tivoli, Rue Fief-de-Chapitre 9 a-b-c-d, Geneva
Construction year	2020-2022
Label	Minergie



Object	Plaine du Loup, Route Plaines-du- Loup 55, Lausanne
Construction year	2020-2022
Label	Minergie P-Eco / SMEO



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

3 Consolidated impact report as of 30.09.2022

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

Acquisitions and developments: GHG emissions²³ avoided

Green Bond	Yearly GHG emissions avoided
Green Bond A: CHF 600m Senior Green Bond (2019)	-10.9
Green Bond B: EUR 600m Senior Green Bond (2021)	-11.0
Weighted average	-10.9

Investments in green buildings allocated to the bonds allow to avoid GHG emissions in the approximate amount of **10.9** kg CO₂ per sqm ERA per year, as compared to benchmark assets²⁴.

Renovations and refurbishments: Reduction of GHG emissions¹³

Green Bond	Reduction of GHG emissions
Green Bond A: CHF 600m Senior Green Bond (2019)	-12.4
Green Bond B: EUR 600m Senior Green Bond (2021)	0.0
Weighted average	-12.4

The impact of renovations and/or refurbishments led to reduction of GHG emissions in the approximate amount of **12.4** kg CO₂ 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 **11.0** kg CO₂ per sqm ERA per year. Since issuance of the bonds on 06.12.2019 and 15.09.2021 until the reporting date 30.09.2022, estimated GHG emissions avoided add up to around **3'858** tons CO₂. This represents GHG savings of **4.7** tons CO₂ per million invested (allocated) Swiss Francs.

²³ Excluding tenants' electricity. All presented CO₂ emissions are in kg CO₂ equivalents. Emission factors have been applied which comply with the methodological principles of the GHG Protocol

²⁴ Benchmark source: pom+, period 2019-2021, and OID (Green Building Observatory), 2021