

REPORT REVIEW

City of Zurich Green Bonds Report

23 June 2025

VERIFICATION PARAMETERS

Type(s) of reporting

- Green Bonds Allocation and Impact Reporting

Relevant standard(s)

- Harmonised Framework for Impact Reporting, ICMA, June 2024
- City of Zurich's Green Bonds Report (as of June 17, 2025)
- City of Zurich's Green Bonds Framework (as of June 5, 2023)

Scope of verification

- Bond(s) identification:

Issue date	ISIN	Maturity date	Amount raised (CHF)
16/08/2024	CH1373904262	09/12/2026	140,000,000
16/08/2024	CH1373904270	08/09/2034	130,000,000
16/08/2024	CH1373904288	09/09/2050	130,000,000

Lifecycle

- Post-issuance verification

Validity

- As long as no changes are undertaken by the Issuer to its Green Bonds Report (as of June 17, 2025)

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SCOPE OF WORK

City of Zurich ("the Issuer") commissioned ISS-Corporate to provide a Report Review¹ on its Green Bonds Report by assessing:

1. The alignment of City of Zurich's Green Bonds Report (as of June 17, 2025) with the commitments set forth in City of Zurich's Green Bonds Framework (as of June 5, 2023).²
2. City of Zurich's Green Bonds Report, benchmarked against the HFIR.
3. The disclosure of proceeds allocation and soundness of reporting indicators — whether the impact metrics align with best market practices and are relevant to the Green Bonds issued.

CITY OF ZURICH OVERVIEW

City of Zurich is located in Switzerland, which is classified as a high income country by the World Bank. The Issuer is a sub-sovereign, with an estimated population of 450,000 inhabitants as of 2025. The level of greenhouse gas emissions per capita in the City of Zurich is of 2.3 tons as of 2023, which has decreased in recent years.

¹ A limited or reasonable assurance is not provided on the information presented in City of Zurich's Green Bonds Report. A review of the use of proceeds allocation and impact reporting is solely conducted against ICMA's Standards (Green Bond) core principles and recommendations where applicable, and the criteria outlined in the underlying Framework. The assessment is solely based on the information provided in the allocation and impact reporting. The Issuer is responsible for the preparation of the report including the application of methods and internal control procedures designed to ensure that the subject matter is free from material misstatement.

² The Framework was assessed as aligned with the Green Bond Principles as of June 6, 2023.

ASSESSMENT SUMMARY

REVIEW SECTION	SUMMARY	EVALUATION
Part I Alignment with the Issuer's commitments set forth in the Framework	City of Zurich's Green Bonds Report meets the commitments set forth in its Green Bonds Framework.	Aligned
Part II.a Alignment with the HFIR	<p>The Green Bonds Report is in line with ICMA's HFIR. The Issuer follows core principles and, where applicable, recommendations.</p> <p>The Issuer provides transparency on the level and frequency of expected reporting, in line with best practices. The City of Zurich has reported within the next fiscal year after issuance, illustrated the environmental impacts, provided transparency on ESG risk management and transparency on the currency used. The Issuer has reported allocation at portfolio level, and has reported on a number of sector-specific indicators. City of Zurich has disclosed its own calculation methodology, its conversion approach, and the estimated lifetime of projects.</p>	Aligned
Part III. Disclosure of proceeds allocation and soundness of reporting indicators	<p>The allocation of the bonds' proceeds has been disclosed, with a detailed breakdown across different eligible project categories as proposed in the Framework.³</p> <p>City of Zurich's Green Bonds Report has adopted an appropriate methodology to report the impact generated by providing comprehensive disclosure on data sourcing, calculation methodologies and granularity, reflecting best market practices.</p>	Positive

³ The assessment is based on the information provided in the Issuer's report. The Issuer is responsible for the preparation of the report, including the application of methods and procedures designed to ensure that the subject matter is free from material misstatement.

REPORT REVIEW ASSESSMENT

PART I: ALIGNMENT WITH COMMITMENTS SET FORTH IN THE GREEN BONDS FRAMEWORK⁴

The following table evaluates the Green Bonds Report against the commitments set forth in City of Zurich's Framework, which are based on the core requirements of the Green Bond Principles and best market practices.

HFIR	OPINION	ALIGNMENT WITH COMMITMENT
Process for project evaluation and selection	<p>City of Zurich confirms to follow the process for project evaluation and selection described in City of Zurich's Green Bonds Framework. The Issuer applied the eligibility criteria set in the Framework to determine whether projects fit within the defined categories.</p> <p>ESG risks associated with the project categories are identified and managed appropriately, as defined in the Framework.</p>	✓
Management of proceeds	<p>City of Zurich confirms to follow the management of proceeds described in City of Zurich's Green Bonds Framework.</p> <p>All the allocated proceeds have been used to finance eligible projects, with no exceptions. The proceeds are tracked appropriately and attested in a formal internal process. Moreover, the Issuer discloses the temporary use of unallocated proceeds, in line with the commitments of the Framework.</p>	✓
Reporting	<p>The report is in line with the initial commitments set in City of Zurich's Green Bonds Framework.</p> <p><i>Further analysis of this section is available in Part III.</i></p>	✓

⁴ City of Zurich's Green Bonds Framework was assessed as aligned with the GBP (as of June, 2022) as of June 6, 2023.

PART II: ASSESSMENT AGAINST THE HARMONISED FRAMEWORK FOR IMPACT REPORTING

Reporting is a core component of the Green Bond Principles, and transparency is of particular value in communicating the expected and/or achieved impact of projects in the form of annual reporting. Green bond issuers are required to report on both the use of green bond proceeds and the environmental impacts at least annually until full allocation or maturity of the bond. The HFIR has been chosen as the benchmark for this analysis as it represents the most widely adopted standard.

The table below evaluates City of Zurich's Green Bonds Report against the HFIR.

CORE PRINCIPLES		
HFIR	GREEN BONDS REPORT	ASSESSMENT
Report on an annual basis	As reporting is a core component of the GBP, City of Zurich reported within one year of issuance. The report will be available on City of Zurich's website. ⁵	✓
Formal internal process to allocate proceeds	The proceeds allocated to green projects as of the Green Bonds Report date have only been allocated to projects that meet the Framework's eligibility criteria.	✓
Transparency on the currency	Allocated proceeds have been reported in a single currency (CHF).	✓
ESG risk management	The Issuer has a system to identify and manage ESG risks connected to the financed projects. The Issuer confirms that no negative effects have been identified in relation to the financed projects.	✓
Illustrate the expected environmental impacts or outcomes	The impact report illustrates the expected environmental impacts made possible by projects to which green bond proceeds have been allocated. It is based on ex-ante estimates (developed prior to project implementation) of expected annual results for a representative year once a project is completed and operating at	✓

⁵ City of Zurich's website: https://www.stadt-zuerich.ch/fd/de/index/finanzen/investor-relations-de.html#gruene_anleihen

	normal capacity. The method of estimating the impacts is made transparent.	
	More information can be found in Part III.	

RECOMMENDATIONS

HFIR	GREEN BONDS REPORT	ASSESSMENT
Report at project or portfolio level	Reporting was conducted on a bond-by-bond basis, whereby one green bond issuance is linked to one or more specific projects. City of Zurich provided a list of projects to which green bonds proceeds have been allocated. The Issuer provides reporting on a green bond portfolio basis as well, whereby proceeds from all of City of Zurich's outstanding green bonds funded a portfolio of projects.	✓
Define and disclose period and process for including/removing projects in the report	<p>All proceeds have been allocated to green assets. Only project financing disbursed and confirmed as eligible up to Dec. 31, 2024, is included in the Green Bonds Report</p> <p>As part of its due diligence, the Issuer monitors the projects included in its green bond program. The Issuer reports transparently on the process used to remove and add projects to the portfolio reported, and confirmed that no projects have been removed.</p>	✓
Signed amount and amount of green bond proceeds allocated to eligible disbursements	<p>City of Zurich indicates the total signed amount and the amount of green bond proceeds allocated to eligible disbursements.</p> <p>Signed amount:</p> <ul style="list-style-type: none"> ▪ New Buildings: CHF 277,300,000 ▪ Repairs: CHF 102,900,000 ▪ Climate Protection Measures: CHF 7,500,000 <p>Allocated amount: CHF 348,500,000</p>	✓
Approach to impact reporting	The report identifies the individual projects and clearly defines, for each project, the overall project	-

	impacts. The impact is reported on the total project size, not pro-rated on the Issuer's share.	
Report on at least a limited number of sector-specific core indicators	<p>To facilitate comparison and benchmarking of project results, City of Zurich reports on sector-specific core indicators.</p> <p>The core indicators are:</p> <ul style="list-style-type: none"> ▪ Certification Standard (Minergie-P ECO, Minergie-A ECO) ▪ Minergie Coefficient in kWh/m² ▪ Energy Saving (Heating Requirement in kWh/m² and GHG Emissions in kg CO₂-eq./kWh avoided) 	✓
Disclose own methodologies, where there is no single commonly used standard	<p>Where there is no single commonly used standard, the Issuer discloses its own methodologies.</p> <p>Minergie Coefficient: no calculation needed as this is a certification given by a third party.</p> <p>Energy Saving and Avoidance of Greenhouse Gases Emissions:</p> <ul style="list-style-type: none"> ▪ Heating requirements for new buildings: the limit value for the heating requirement according to Minergie-P is 30% below the legal limit value according to MuKE.⁶ With the selected new construction projects, a total of 369 MWh of heating energy can be saved each year. Over an estimated service life of 60 years, around 23,750 MWh will be saved compared to conventionally constructed buildings (369 MWh per year). To calculate the impact, the savings are converted into the CO₂ impact using emission factors. The emission factors (kg CO₂-eq / kWh) differ depending on the energy source used. The KBOB life cycle 	✓

⁶ MuKE (Grundlagen/Produktreglement, p. 12): <https://www.minergie.ch/de/zertifizieren/minergie-p/>

assessment data⁷ in the construction sectors serve as the basis for the calculation. For the selected new buildings, the CO₂ effect is 1,300 tons of CO₂-eq due to the savings in heating energy requirements over the service of 60 years (22 tons of CO₂-eq per year). Additional savings resulting from more efficient technology are not included.

- Refurbishment: the Issuer states that for refurbishment to Minergie ECO standard, there are no requirements in relation to the statutory limit values. Therefore the impact is not calculated due to a lack of suitable methodology.
- Funding program for heating replacement and heating optimization: to calculate the greenhouse gas emissions saved, the savings are converted into CO₂ equivalents using emission factors. The emission factors (kg CO₂-eq/kWh) vary depending on the energy source. The KBOB life cycle assessment factors in the construction sector serve as the basis for the calculations. For gas heating, a gas mix of 35% biogas and 65% natural gas was assumed. Electricity emissions were calculated using the electricity product ewz.econatur (0.01208 kg CO₂-eq /kWh) and for district heating, 0.09144 kg CO₂-eq /kWh. In the calculations, an annual performance factor (APF) of 2.5 and 4, respectively, was assumed for the air-to-water heat pumps, geothermal heat pumps, and water-to-water heat pumps. A service life of 20 years was assumed for oil and gas heating systems.
- Funding program for energy-efficient building renovations: the factors for calculating greenhouse gas emission reductions were estimated during the

⁷ KBOB life cycle assessment: [Koordinationskonferenz der Bau- und Liegenschaftsorgane der öffentlichen Bauherren KBOB](#)

	<p>development of the funding program (Lemon Consult 2020: Funding for Energy-Efficient Building Renovation – Funding Measures for the Urban Context, Report for the City of Zurich, Environmental and Health Protection). They were taken from the GEAK calculations. The GEAK tool contains the national weighting factors and primary energy factors (KBOB).</p> <p>More information can be found in Part III.</p>	
Disclosure of the conversion approach	The Issuer converts units reported for individual projects based on a standard conversion factor and includes appropriate disclosure of the conversion approach in the report.	✓
Projects with partial eligibility	All projects are 100% eligible for financing.	N/A
Use (and disclosure) of the attribution approach	The impact achieved by each of the financed projects are attributed to one type of intervention only (e.g., only energy efficiency improvements in buildings).	N/A
Ex-post verification of specific projects	The Issuer has received final minergie certificates for all building projects. For funding programs there is no ex-post verification.	✓
Report the estimated lifetime results and/or project's economic life (in years)	To illustrate the impact of the project over its lifetime, the Issuer reports on the estimated lifetime results (in years) for its building projects and heating funding program, not for its energy-efficient renovations funding program.	✓

OPINION

City of Zurich follows the HFIR's core principles and key recommendations. The Issuer provides transparency on the level and frequency of expected reporting, in line with best practices. The City of Zurich has reported within the next fiscal year after issuance, illustrated the environmental impacts, provided transparency on ESG risk management and transparency on the currency used. The Issuer has reported allocation at portfolio level, and has reported on a number of sector-specific indicators. City of Zurich has disclosed its own calculation methodology, its conversion approach, and the estimated lifetime of projects.

PART III: DISCLOSURE OF PROCEEDS ALLOCATION AND SOUNDNESS OF THE IMPACT REPORTING INDICATORS

Use of proceeds allocation

Use of proceeds allocation reporting contextualizes impacts by presenting the number of investments allocated to the respective use of proceeds projects.

Allocation reporting occurred within one year of issuance, after 87% of proceeds have been allocated.

The Issuer transparently disclosed the amount of unallocated proceeds and the temporary investments. City of Zurich will allocate the amount not yet allocated to the tranche with the longest term (that is ISIN CH1373904288).

Proceeds allocated to eligible projects

The allocation of proceeds is broken down at the portfolio level and at the project level. The Issuer has provided details about the type of projects included in the portfolio.

The allocation reporting section of City of Zurich's Green Bonds Report aligns with best market practices by providing information on:

- The number of projects (re-)financed
- The total amount of proceeds in Swiss Franc (CHF)
- The total amount of allocated and unallocated proceeds
- The completion date for each project and the project description (including construction and building documentation or press release document)
- The total amount of proceeds allocated to construction costs or property loan amount.

Output, outcome and impact reporting indicators

The table below presents an independent assessment of the Issuer's report and disclosure on the output, outcome and/or impact of projects/assets using indicators.

ELEMENT	ASSESSMENT
Relevance	<p>The impact indicators chosen by the Issuer for these bonds are the following:</p> <ul style="list-style-type: none"> ▪ Certification Standard (Minergie-P ECO, Minergie-A ECO) ▪ Minergie Coefficient in kWh/m² ▪ Energy Saving (Heating Requirement in kWh/m² and GHG Emissions in kg CO₂-eq./kWh avoided) <p>These indicators are qualitative, quantitative, and material to the use of proceeds categories financed through these bonds and in line with the Suggested Impact Reporting metrics for Green Building Projects by the HFIR. This aligns with best market practices.</p>
Data sourcing and methodologies of quantitative assessment	<p>For its impact indicators, the Issuer uses internationally recognized certification standards for green buildings, such as Minergie-P-ECO and Minergie ECO, in line with the core indicator proposed by the HFIR.</p> <p>Minergie Coefficient: no calculation needed as this is a certification given by a third party.</p> <p>Energy Saving and Avoidance of Greenhouse Gases Emissions:</p> <ul style="list-style-type: none"> ▪ Heating requirements for new buildings: the limit value for the heating requirement according to Minergie-P is 30% below the legal limit value according to MuKE⁸. With the selected new construction projects, a total of 369 MWh of heating energy can be saved each year. Over an estimated service life of 60 years, around 23,750 MWh will be saved compared to conventionally constructed buildings. To calculate the impact, the savings are converted into the CO₂ impact using emission factors. The emission factors (kg CO₂-eq/kWh) differ depending on the energy source used. The KBOB life cycle assessment data⁹ in the construction sectors serve as the basis for the calculation. For the selected new buildings, the CO₂ effect is 1,300 tons of CO₂-eq due to the savings in heating

⁸ MuKE (Grundlagen/Produktreglement, p. 12): <https://www.minergie.ch/de/zertifizieren/minergie-p/>

⁹ KBOB life cycle assessment: [Koordinationskonferenz der Bau- und Liegenschaftsorgane der öffentlichen Bauherren KBOB](#)

	<p>energy requirements over the service of 60 years. Additional savings resulting from more efficient technology are not included.</p> <ul style="list-style-type: none"> ▪ Refurbishment: the Issuer states that for refurbishment to Minergie ECO standard, there are no requirements in relation to the statutory limit values. Therefore the impact is not calculated due to a lack of suitable methodology. ▪ Funding program for heating replacement and heating optimization: to calculate the greenhouse gas emissions saved, the savings are converted into CO₂ equivalents using emission factors. The emission factors (kg CO₂-eq/kWh) vary depending on the energy source. The KBOB life cycle assessment factors in the construction sector serve as the basis for the calculations. For gas heating, a gas mix of 35% biogas and 65% natural gas was assumed. Electricity emissions were calculated using the electricity product ewz.econatur (0.01208 kg CO₂- eq /kWh) and for district heating, 0.09144 kg CO₂- eq /kWh. In the calculations, an annual performance factor (APF) of 2.5 and 4, respectively, was assumed for the air-to-water heat pumps, geothermal heat pumps, and water-to-water heat pumps. A service life of 20 years was assumed for oil and gas heating systems. ▪ Funding program for energy-efficient building renovations: The factors for calculating greenhouse gas emission reductions were estimated during the development of the funding program (Lemon Consult 2020: Funding for Energy-Efficient Building Renovation – Funding Measures for the Urban Context, Report for the City of Zurich, Environmental and Health Protection). They were taken from the GEAK calculations. The GEAK tool contains the national weighting factors and primary energy factors (KBOB).
Baseline selection	<p>Energy savings refer to the Primary Energy Use saved and the GHG emissions avoided. To calculate the impact, the savings are converted into the CO₂ impact using emission factors. The emission factors (kg CO₂-eq / kWh) differ depending on the energy source used. The KBOB life cycle assessment data¹⁰ in the construction sectors serve as the basis for the calculation.</p>

¹⁰ KBOB life cycle assessment: [Koordinationskonferenz der Bau- und Liegenschaftsorgane der öffentlichen Bauherren KBOB](#)

**Scale and
granularity**

The impact data is presented at the use of proceeds project level for the indicators.

High-level mapping of the impact indicators with the U.N. Sustainable Development Goals

Based on the project categories financed and refinanced by the bonds as disclosed in the Issuer's Green Bonds Report, the impact indicators adopted by City of Zurich for its Green Bonds can be mapped to the following SDGs, according to ISS ESG's SDG Solutions Assessment, a proprietary methodology designed to assess the impact of an Issuer's product or services on the U.N. SDGs.

IMPACT INDICATORS	SUSTAINABLE DEVELOPMENT GOALS
Certification Standard (Minergie-P ECO, Minergie-A ECO)	  
<ul style="list-style-type: none"> Minergie Coefficient in kWh/m² Energy Saving (Heating Requirement in kWh/m² and GHG Emissions in kg CO₂-eq./kWh Avoided) 	 

OPINION

The allocation of the bonds' proceeds has been disclosed, with a detailed breakdown across different eligible project as proposed in the Framework. The Green Bonds Report has adopted an appropriate methodology to report the impact generated by providing comprehensive disclosure on data sourcing, calculation methodologies and granularity, reflecting best market practices. In addition, the impact indicators used align with best market practices using the HFIR's recommended metrics.

DISCLAIMER

1. Validity of the External Review ("External Review"): Valid as long as no changes are undertaken by the Issuer to its Green Bonds Report (as of June 17, 2025).
2. ISS Corporate Solutions, Inc. ("ISS-Corporate"), a wholly owned subsidiary of Institutional Shareholder Services Inc. ("ISS"), sells, prepares, and issues External Reviews, on the basis of ISS-Corporate's proprietary methodology. In doing so, ISS-Corporate adheres to standardized procedures designed to ensure consistent quality.
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ANNEX 1: Methodology

Review of the post-issuance reports

The ISS-Corporate Report Review provides an assessment of labeled transactions reporting against international standards using ISS-Corporate's proprietary [methodology](#).

High-level mapping to the SDGs

The 17 Sustainable Development Goals (SDGs) were endorsed in September 2015 by the United Nations and provide a benchmark for key opportunities and challenges toward a more sustainable future. Using a proprietary methodology based on ICMA's Green, Social and Sustainability Bonds: A High-Level Mapping to the Sustainable Development Goals, the extent the Issuer's reporting and project categories contribute to related SDGs is identified.

ANNEX 2: Quality management processes

ISSUER'S RESPONSIBILITY

The Issuer's responsibility was to provide information and documentation on:

- Green Bonds Report
- Green Bonds Framework
- Proceeds allocation
- Reporting impact indicators
- Methodologies and assumptions for data gathering and calculation
- ESG risk management

ISS-CORPORATE'S VERIFICATION PROCESS

Since 2014, ISS Group, which ISS-Corporate is part of, has built up a reputation as a highly reputed thought leader in the green and social bond market and has become one of the first CBI-approved verifiers.

This independent Report Review has been conducted by following ICMA's Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds External Reviews, and its methodology, considering, when relevant, the ISAE 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information.

The engagement with City of Zurich took place from in May and June 2025.

ISS-CORPORATE's BUSINESS PRACTICES

ISS-Corporate conducted this verification in strict compliance with the ISS Group Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behavior and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

About this Report Review

Companies turn to ISS-Corporate for expertise in designing and managing governance, compensation, sustainability and cyber risk programs that align with company goals, reduce risk and manage the needs of a diverse shareholder base by delivering best-in-class data, tools and advisory services.

ISS-Corporate assesses the alignment of the Issuer's report with external principles (e.g., the Green/Social Bond Principles), assesses the alignment of the Issuer's report against the commitments in the respective Framework, and analyzes the disclosure of proceeds allocation, data source and calculation methodologies of the reporting indicators against best market practices. Following these guidelines, we draw up an independent Report Review so investors are as well-informed as possible about the proceeds allocation and the impact of the sustainable finance instrument(s).

Please visit ISS-Corporate's [website](#) to learn more about our services for bond issuers.

For information on Report Review services, please contact SPOsales@iss-corporate.com.

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