

Second-Party Opinion

Republic and Canton of Geneva

Sustainability Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the Republic and Canton of Geneva Sustainability Bond Framework is credible and impactful and aligns with the Sustainability Bond Guidelines 2021, Green Bond Principles 2021, and Social Bond Principles 2021. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds – Energy Efficiency, Renewable Energy, Clean Transportation, Access to Essential Services, and Affordable Housing – are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental or social impacts and advance the UN Sustainable Development Goals, specifically SDG 3, 4, 7, 10, 11, and 13.



PROJECT EVALUATION / SELECTION The process for evaluation and selection will be overseen by the Steering Group chaired by the Director General of Finance of the Canton of Geneva. The final approval of projects will be provided by the “Conseiller-ère d’État” in charge of the Department of Finance and Human Resources. Sustainalytics considers the project selection process in line with market practice.



MANAGEMENT OF PROCEEDS The Finance and Human Resources Department, including the General Treasury of the Canton, in charge of cantonal debt and centralized liquidity management, will be responsible for managing the proceeds under the Framework and overseeing the allocation to eligible projects. Canton of Geneva intends to reach full allocation within 24 months of issuance. Pending full allocation, unallocated proceeds will be included in the cash-pooling system of the general treasury and will not be used for any temporary financial investments. The Canton of Geneva’s social and environmental policies as well as risk mitigation processes are applicable to all allocation decisions made under the Framework. Sustainalytics considers these risk management systems to be adequate. This is in line with market practice.



REPORTING The Canton of Geneva is committed to reporting on the allocation of proceeds, to be published on the Department of Finance and Human Resources’ website annually. In addition, the Canton of Geneva is committed to reporting on the relevant impact metrics, such as number of beneficiaries, and avoided/reduced of greenhouse gas (GHG) emissions. Sustainalytics views the allocation and impact reporting as aligned with market practice.

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Issuer Location	Geneva, Switzerland

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Introduction

The Republic and Canton of Geneva (the “Canton of Geneva”, the “Canton”, “Geneva”, or the “Issuer”) is one of the 26 cantons forming the Swiss Confederation. The Canton of Geneva had a population of 506,343 inhabitants as of December 2020, spread among 45 municipalities, and a GDP of almost 54 billion Swiss francs (EUR 50.87 billion). Geographically, it is located at the western end of Lake Geneva and on both sides of the Rhone, its main river.

The Canton of Geneva has developed the Sustainability Bond Framework (the “Framework”) under which it intends to issue green, social, and sustainability bonds and use the proceeds to finance and refinance, in whole or in part, existing and future projects that aim at reducing social inequalities and advancing the shift towards a low-carbon economy in the Canton. The Framework defines eligibility criteria in five areas:

1. Energy Efficiency
 - A. Energy Efficiency - Construction
 - B. Energy Efficiency - Renovation
2. Renewable Energy
3. Clean Transportation
 - A. Public transport
 - B. Electric mobility
4. Access to Essential Services
 - A. Education
 - B. Public health
 - C. Access to essential services for migrants and refugees
 - D. Integration of people with disabilities
5. Affordable Housing

The Canton of Geneva engaged Sustainalytics to review the Sustainability Bond Framework, dated November 2021, and provide a Second-Party Opinion on the Framework’s environmental and social credentials and its alignment with the Sustainability Bond Guidelines 2021 (SBG), Green Bond Principles 2021 (GBP), and Social Bond Principles 2021 (SBP).¹ This Framework will be published in a separate document.²

Scope of work and limitations of Sustainalytics’ Second-Party Opinion

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent³ opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework’s alignment with the Sustainability Bond Guidelines 2021, Green Bond Principles 2021, and Social Bond Principles 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer’s sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.11, which is informed by market practice and Sustainalytics’ expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of Canton of Geneva’s management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. Canton of Geneva representatives have confirmed (1) they understand it is the sole responsibility of Canton of Geneva to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics

¹ The Sustainability Bond Guidelines, Green Bond Principles, and Social Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainability-bond-guidelines-sbg/>

² The Sustainability Bond Framework is available on Republic and Canton of Geneva’s website at: <https://www.ge.ch/dossier/finance-durable>

³ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and the Canton of Geneva.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realised allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Canton of Geneva has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Sustainability Bond Framework

Sustainalytics is of the opinion that the Sustainability Bond Framework is credible, impactful and aligns with the four core components of the GBP and SBP. Sustainalytics highlights the following elements of Canton of Geneva's Sustainability Bond Framework:

- Use of Proceeds:
 - The eligible categories, Energy Efficiency, Renewable Energy, Clean Transportation, Access to Essential Services, and Affordable Housing are aligned with those recognized by the GBP and SBP. Sustainalytics notes that the projects funded under the Framework are expected to reduce social inequalities and advance the shift towards a low-carbon economy in the Canton of Geneva.
 - Geneva has defined a 24-month look-back period for refinancing activities, which is in line with market practice. Eligible expenditures may include CAPEX and OPEX, including for the latter grants to subsidized institutions. Projects are carried out directly by the Canton or through subsidized institutions, to which it has delegated the implementation of a public policy.
 - Within the Energy Efficiency category, Geneva may finance the following activities:
 - New building constructions that comply at least with the "Haute Performance Energétique (HPE-neuf)" standard.⁴
 - Major building renovations that comply with the "Haute Performance Energétique (HPE-Réno)" standard⁵ and result in 20% reduction of energy consumption, GHG emissions or average *Indice de dépense de chaleur*⁶ ("IDC").
 - High efficiency windows and doors with low U-value ($U \leq 3,0\text{W/m}^2\text{K}$)
 - Substantial substitutions of electricity or heat producing installations powered by fossil fuels by connection to thermal networks supplied mainly by renewable energies or by ambient air heat pumps or geothermal energy, and/or solar energy.

⁴ The High Energy Performance, or "Haute Performance Energétique (HPE-neuf)" standard is defined by cantonal law, article 12B, at: https://silgeneve.ch/legis/data/rsg_l2_30p01.htm

⁵ The High Energy Performance for renovation, or "Haute Performance Energétique (HPE-reno)" standard is defined by cantonal law, article 12B. al. 4 at: https://silgeneve.ch/legis/data/rsg_l2_30p01.htm

⁶ The heating requirement index or "Indice de dépense de chaleur (IDC)" is an indicator of the energy consumption of a building to cover its heat needs (heating and domestic hot water). The index is defined by cantonal law, article 15C, at: <https://www.ge.ch/document/11398/telecharger>

- Other energy efficiency measures that aim at reducing heating requirements index for buildings below 600 MJ/m² (circa 167kWh/m²), with the exception of projects related to equipment dependent on fossil fuels.
- Sustainalytics considers projects under the Energy Efficiency category to be aligned with market practice and positively notes the exclusion of equipment dependent on fossil fuels for projects aiming at reducing heating requirements index.
- In the Renewable Energy category, the Canton of Geneva may finance renewable energy generation, transportation, and distribution – with the exclusion of biomass and fossil fuels - as follows:
 - Electricity and/or heat generation from geothermal and solar energy sources. Geothermal projects must observe a carbon intensity threshold equal or below 100gCO₂/kWh, which is aligned with market practice.
 - District energy systems, including the extension and interconnection of thermal networks.
 - Replacement of fossil fuel heating systems by electric heat pumps.
 - Sustainalytics considers the investments under the Renewable Energy category to be aligned with market practice and positively notes the exclusion of biomass and fossil fuels. Sustainalytics encourages the Canton to measure and report on quantitative impact of projects, where feasible.
- In the Clean Transportation category:
 - Geneva intends to foster a modal shift to public transportation by financing existing and new infrastructures for transportation network⁷ administration and rail transportation⁸, as well as electric rolling stock.
 - In addition, the Canton of Geneva may finance electric vehicles⁹ and electric charging stations.
 - Sustainalytics considers the projects aligned with market practice and notes that they are expected to reduce GHG emissions and air pollution.
- In Access to Essential Services, Geneva may finance the following activities:
 - The creation, expansion, and construction of education facilities, including primary, secondary, university, and vocational. Projects will benefit the general population of the Canton of Geneva in a context where education is accessible to all regardless of ability to pay.
 - The creation, expansion, and construction of healthcare facilities, and the equipment needed in such infrastructures.
 - Access to essential services for migrants and refugees. The projects include services for migrant populations that are the responsibility of the Canton, mainly the financing of accommodation costs for migrants and refugees.
 - Projects that aim at facilitating the integration of people with disabilities¹⁰ and relate to the construction, renovation and equipment of institutions for people with disabilities¹¹ (*établissements accueillant des personnes handicapées*, or 'EPH').
 - Sustainalytics notes that the projects align with market practice and could contribute to reducing social inequalities through access to education and healthcare, and social and economic integration in the Canton.
- In the Affordable Housing category, Geneva may finance social housing projects for low-income beneficiaries.¹² The Canton controls income level when allocating housing and during the entire

⁷ The Geneva Public Transport ("TPG") reports on its website that 51% of fleet is electric vehicles powered by 100% renewable energy. TPG has the ambition to have a fleet of 100% electric vehicles by 2030. While a majority of travelers use an electric mode of transport, the proportion is expected to increase with the development of transportation network. The recently developed multimodal infrastructures may accommodate non-electric vehicle temporarily. Furthermore, the transparency of eligible investment projects is also guaranteed in the bills voting on its investment credits.

⁸ A majority of the rail network in Switzerland is electric, as per Swiss Federal Railways (CFF) dataset, at:

<https://reporting.sbb.ch/fr/infrastructures?years=0,1,4,5,6,7&scroll=374>

⁹ Registered for the first time in 2019.

¹⁰ Persons with disabilities as defined in the Law on the Integration of Persons with Disabilities (*Loi sur l'intégration des personnes handicapées*, K1 36 LIPH, art. 2).

¹¹ As per the Directives for Institutions for Persons with Disabilities (*Directives pour la gestion des établissements accueillant des personnes handicapées (EPH)*, at : <https://www.ge.ch/document/directives-gestion-etablissements-accueillant-personnes-handicapees-eph>)

¹² Persons whose income does not exceed the limits set and according to the number of family members (General Law on Housing and Tenant Protection, *Loi générale sur le logement et la protection des locataires*, LGL, art.30)

duration of the lease. In addition to tenant control, Switzerland has rent control mechanisms in place to ensure affordability. Sustainalytics notes positively that the target populations are defined, and that income thresholds are in line with those defined by cantonal law. For more information about the impacts of social housing in Switzerland and Geneva, please refer to Section 3.

- **Project Evaluation and Selection:**
 - The selection and evaluation of projects follows an internal process consisting of several complementary stages. It will be overseen by a steering group, chaired by the Director General of Finance of the Canton of Geneva. The final approval of projects in accordance with the criteria outlined in the Framework will be provided by the “Conseiller-ère d’État”¹³ in charge of the Department of Finance and Human Resources.
 - The Canton of Geneva’s social and environmental policies as well as risk mitigation processes are applicable to all allocation decisions made under the Framework. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectations. For additional details, please refer to Section 2.
 - Based on the presence of a dedicated committee and the risk management systems in place, Sustainalytics considers this process to be in line with market practice.
- **Management of Proceeds:**
 - Net proceeds from the issuances will be integrated into the centralized management of the Cantonal treasury - cash pooling. The General Treasury of the Canton, in charge of cantonal debt and centralized liquidity management, will be responsible for managing the proceeds under the Framework and the Finance and Human Resources Department will oversee the allocation to eligible projects.
 - The Canton of Geneva intends to reach full allocation within 24 months of issuance. Pending full allocation, unallocated proceeds will be included in the cash-pooling system of the general treasury. Unallocated proceeds will not be used for any temporary financial investments.
 - Based on these elements, Sustainalytics considers this process to be in line with market practice.
- **Reporting:**
 - The Canton of Geneva is committed to reporting on the allocation of proceeds, to be published on the Department of Finance and Human Resources’ website annually at least until full allocation of proceeds. The allocation reporting will include details such as list of projects financed, total amount allocated to eligible project categories, share of financing vs refinancing activities as well as the balance of unallocated proceeds.
 - In addition, the Canton of Geneva is committed to reporting on the relevant impact metrics. The Issuer intends to define metrics in a clear and constant manner for each category of eligible project, and to make the choice of reporting indicators available when the first annual report is published after the issuance. This may include the number of beneficiaries per year from social projects and GHG emissions avoided/reduced from green projects.
 - Furthermore, an external review will be carried out on the annual report by a third-party auditor, the Canton’s Court of Auditors, an independent body whose magistrates are elected by citizens. The external verification will cover (i) the allocation of proceeds and (ii) the impact reporting.
 - Based on the commitment to both allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

Alignment with Green bonds Principles 2021, Social bonds Principles 2021 and Sustainability Bond Guidelines 2021

Sustainalytics has determined that the Sustainability Bond Framework aligns with the four core components of the GBP and SBP. For detailed information please refer to Appendix 1: Sustainability Bond/ Sustainability Bond Programme External Review Form.

¹³ The “Conseil d’État” (Council of State) is the government of the Canton of Geneva composed of up to seven departments headed by “Conseillers-ères d’État” (State Councilors).

Section 2: Sustainability Strategy of the Canton of Geneva

Contribution of Framework to the Republic and Canton of Geneva's sustainability mandate

In 2001, the Canton of Geneva became the first Swiss canton to adopt a law on public action for sustainable development (Agenda 21), which stipulates that all public authorities' activities are part of a sustainable development of Geneva and its region. The *Concept cantonal du développement durable 2030*¹⁴ ("Cantonal Concept for Sustainable Development"), adopted by the Council of State in 2017, supplements the law by detailing the Canton's strategic objectives for 2030 in two parts. The first is structured around eight fields of action in the following thematic areas: (i) production methods and consumption, (ii) climate change, (iii) territorial development, (iv) natural resources, (v) economic and finance system, (vi) social cohesion, (vii) training and innovation, (viii) health of the population. The second part covers themes such as governance, the role of the Canton vis-à-vis municipalities, as well as international cooperation and the "Greater Geneva" transborder agglomeration. The *Plan d'actions développement durable*¹⁵ ("Action Plan Sustainable Development") 2019-2030, adopted by the Council of State in June 2019, includes nineteen actions regrouped under three categories, including governance, collaboration with municipalities, and production methods and consumption. Sustainalytics notes that the Canton of Geneva's *Stratégie économique cantonale 2030*¹⁶ ("Economic Strategy 2030") incorporates environmental considerations, including green economy, and that Geneva has been mainstreaming, since 2001, the concept of "industrial ecology" in its public policies, including in its Constitution in 2012.

The *Plan climat cantonal 2030 – 2e génération*¹⁷ ("Cantonal Climate Plan 2030" or "PCC") presented as a reinforced plan by the Council of State in June 2021, is an updated version of tome 1, adopted in 2015, and tome 2, adopted in 2017. The overall objectives of the plan are to reduce GHG emissions by 60% by 2030 compared to 1990 levels, achieve climate neutrality by 2050 and adapt to climate change impacts throughout Geneva's territory. Additionally, the PCC takes into account indirect GHG emissions, including those induced outside Geneva's territory. The PCC is centred around the reduction of greenhouse gas (GHG) emissions, adaptation to climate change and the implication of local stakeholders. It includes seven axes, namely: (i) energy and buildings, (ii) mobility, (iii) consumer goods, (iv) territory development (reduction and adaptation), (v) healthcare, (vi) biodiversity, (vii) change management and stakeholder support.

To affirm its commitment to the climate emergency and energy transition, the Council of State adopted the *Plan directeur de l'énergie*¹⁸ ("Energy Master Plan" or "PDE") for the period of 2020-2030. The PDE's aim is to divide energy consumption by 3.5 and simultaneously triple the share of renewables in the cantonal energy mix. Furthermore, the *Stratégie Biodiversité Genève 2030*¹⁹ ("Geneva 2030 Biodiversity Strategy" or "SBG") aims to reconcile the development of activities in the territory with the protection of local biodiversity. The SBG identifies three strategic axes and proposes a vision supported by guidelines for twelve key areas as well as an operational roadmap with 117 indicators. Additionally, in 2020, the Council of State adopted a new *Plan d'actions de la mobilité douce*²⁰ ("Action Plan for Soft Mobility") 2019-2023 which defines the projects in favour of pedestrians and cyclists which will be carried out as a priority until 2023 by the Canton of Geneva, the municipalities and other public and private partners. The *Plan d'actions des transports collectifs*²¹ ("Public Transport Action Plan") 2020-2024 aims to define the transport supply necessary to meet the growth in travel demand in the canton while focusing on environmental issues.

In the face of the coronavirus disease (COVID-19) pandemic and for the decade to come, the Department of Social Cohesion launched the *Plan d'action contre la précarité à Genève*²² ("Action Plan against Insecurity in Geneva") in 2021. It targets seven objectives, namely (i) simplify procedures and strengthen access to rights, (ii) improve the Geneva social assistance system, (iii) prevent situations of insecurity or social distress and guarantee dignity, (iv) help, support and accompany senior citizens, (v) offer decent housing conditions to

¹⁴ Republic and Canton of Geneva, "Concept cantonal du développement durable 2030", (2017), at: <https://www.ge.ch/document/6937/telecharger>

¹⁵ Republic and Canton of Geneva, "Plan d'actions développement durable 2019-2023", (2019), at: <https://www.ge.ch/document/16320/telecharger>

¹⁶ Republic and Canton of Geneva, "Stratégie économique cantonale 2030 – Tome 1", (2017), at: <https://www.ge.ch/document/2745/telecharger>

¹⁷ Republic and Canton of Geneva, "Plan climat cantonal 2030 – 2e génération", (2021), at: <https://www.ge.ch/document/24973/telecharger>

¹⁸ Republic and Canton of Geneva, "Plan directeur de l'énergie 2020-2030", (2020), at: <https://www.ge.ch/document/22488/telecharger>

¹⁹ Republic and Canton of Geneva, "Stratégie Biodiversité Genève 2030", (2018), at: <https://www.ge.ch/document/7302/telecharger>

²⁰ Republic and Canton of Geneva, "Plan d'actions de la mobilité douce", (2020), at: <https://www.ge.ch/document/17658/telecharger>

²¹ Republic and Canton of Geneva, "Plan d'actions des transports collectifs", (2019), at: <https://www.ge.ch/document/15619/telecharger>

²² Republic and Canton of Geneva, "Plan d'action contre la précarité à Genève", (2021), at: <https://www.ge.ch/document/plan-action-cantonal-contre-precarite>

everyone, (vi) strengthen the link between social action and the economy, (vii) strengthen social cohesion in urban areas.

Sustainalytics is of the opinion that the Canton of Geneva Sustainability Framework is aligned with the Action Plan for Sustainable Development, PCC, PDE, SBG, Action Plan for Soft Mobility, Public Transport Action Plan and Action Plan against Insecurity. The Framework may assist the canton in meeting its GHG emissions target by leveraging financing towards low-carbon projects and contribute to the Canton of Geneva's broader sustainable development goals. Considering the forgoing, Sustainalytics considers the Canton of Geneva to be well positioned to issue green, social, and/or sustainability bonds.

Well-positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the use of proceeds from the Framework will be directed towards eligible projects that are expected to have positive environmental and social impact, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. Some key environmental and social risks associated with the eligible projects, could include (i) land use and biodiversity loss associated with large-scale infrastructure development, (ii) human and labour rights (including occupational health and safety risks), (iii) risks of increasing inequalities if social programmes are not appropriately targeted to beneficiaries or if universal access is not ensured, and (iv) risks related to bribery and corruption.

Sustainalytics is of the opinion that the Canton of Geneva is able to manage and/or mitigate potential risks through implementation of the following:

- The *Etudes de l'impact sur l'environnement*²³ ("Environmental Impact Studies" or "EIE") is enshrined in article 10a to 10d of the Federal law of 7 October 1983 on the protection of the environment and refers to the construction of new facilities or the modification of existing installations. An environmental impact assessment ("EIA") is always carried out within the framework of a decisive authorization procedure, which is federal or cantonal. The Canton of Geneva acts as an interlocutor to support the establishment of environmental impact reports and other requirements, and to monitor the environmental impacts of major projects as per the Confederation's EIA manual and the *Règlement d'application de l'ordonnance fédérale relative à l'étude de l'impact sur l'environnement*²⁴ ("Application regulations of the federal ordinance on the impact study on the environment" or "ROEIE").
- Switzerland's Code of Obligations and Labour Act address a wide range of labour rights including worker health and safety.²⁵ The Canton of Geneva has robust human and labour rights legislation in place monitored by the *Direction générale de l'office cantonal de l'inspection et des relations du travail*²⁶ ("Cantonal Office of Labor Inspection and Relations" or "OCIRT"). Furthermore, the Canton of Geneva developed the *Plan d'action pour promouvoir l'égalité au sein de l'administration cantonale genevoise* ("Action plan to promote equality within the Geneva cantonal administration") 2018-2023. Among the measures implemented in this context are (i) the "Rules for equality and the prevention of discrimination on grounds of sex, sexual orientation and gender identity"²⁷, which entered into force on 20 September 2017, (ii) the signing of the Swiss charter on diversity at work²⁸, on February 28, 2018, (iii) an analysis on equal pay concluding no unexplained difference, and (iv) the receipt of the Swiss LGBTI-Label, which rewards the Canton's policy of inclusion, equality and diversity.
- Concerning the risks of increasing inequalities for social projects, the main public assistance office of the Canton of Geneva, the General Hospice, ensures that support is provided to all individuals and facilities in need. In addition to socio-economic status, the Canton of Geneva has demonstrated efforts to take into account characteristics such as gender, age, migration status, and disability by adopting relevant legislations such as the Law for the Integration of People with Disability, the Law for the Integration of Foreigners, Law for Specialized Education and the Law for the Construction of Public Utility Housing. Furthermore, the Council of State's legislative program planned in 2020 to

²³ Confederation suisse, « Directive de la Confédération sur l'étude de l'impact sur l'environnement », (2009), at : https://www.vd.ch/fileadmin/user_upload/organisation/dse/sg-dse/fichiers_pdf/Manuel_EIE_1_.pdf

²⁴ Republic and Canton of Geneva, « Règlement d'application de l'ordonnance fédérale relative à l'étude de l'impact sur l'environnement » (2001), at : https://silgeneve.ch/legis/data/rsg_K1_70p05.htm

²⁵ Confédération suisse, "Législation sur le travail", (2021), at : <https://www.ch.ch/fr/droit-du-travail/>

²⁶ Republic and Canton of Geneva, « OCIRT - Direction générale de l'office cantonal de l'inspection et des relations du travail », at : <https://www.ge.ch/organisation/ocirt-direction-generale-office-cantonal-inspection-relations-du-travail>

²⁷ Republic and Canton of Geneva, « Règlement pour l'égalité et la prévention des discriminations en raison du sexe, de l'orientation sexuelle et de l'identité de genre », (2017), at : https://silgeneve.ch/legis/data/rsg_b5_05p11.htm

²⁸ Republic and Canton of Geneva, « Charte suisse de la diversité au travail », (2018), at <https://www.ge.ch/document/charte-suisse-diversite-au-travail>

revise and reinforce the mechanism for the protection of minors in Geneva.²⁹ Sustainalytics notes that the Canton of Geneva faces growing social inequalities in health and affordable housing in light of the COVID-19 pandemic effects.

- Switzerland ratified the OECD Anti-Bribery Convention in 2000 and the United Nations Convention against Corruption (UNCAC) in 2009. Switzerland has been involved in international efforts to fight corrupt practices, notably through the Rule of Law and Anti-Corruption Center ("ROLACC"), based in Geneva. Furthermore, it ranks very well among countries globally (third out of 180 countries) according to Transparency International's Corruption Perception Index 2020.³⁰ To mitigate corruption risks, Switzerland has a comprehensive anti-corruption law laid out in the Swiss Criminal Code ("SCC"). The Canton of Geneva has jurisdiction under Swiss law and has appropriate anti-corruption legislation in place.

Sustainalytics notes that the Canton of Geneva has a Risk Management Regulation along with Internal Control Requirements.

Based on these policies, standards and assessments, Sustainalytics is of the opinion that Canton of Geneva has implemented adequate measures and is well-positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

All five use of proceeds eligible categories are aligned with those recognized by GBP and SBP. Sustainalytics has focused on two below where the impact is specifically relevant in the local context.

Reducing buildings' energy consumption and associated carbon footprint

As part of the *Plan climat cantonal 2030 – 2^{ème} génération*,³¹ the Canton identified buildings and their energy consumption as a strategic focus area. In 2012, buildings accounted for approximately 40% of the GHG emissions of the Canton. Most of these emissions are induced by heating (86%), while electricity consumption was responsible for 14% of total. While emissions related to the Canton's electricity consumption (all uses combined) increased by 18% between 1990 and 2018, it is worth noting that the electricity generated in Switzerland mainly comes from low-carbon sources (93.45%), hydropower accounting for 59.9% of total generation while nuclear and fossil-fuel sources accounted for 33.5% and 2.3%, respectively.³² The Canton of Geneva purchases electricity that is 100% renewable with hydropower accounting for 93% of total while solar and other renewables accounted for 1.4% and 5.6%, respectively in 2018.³³

To achieve the overarching goal of reducing the Canton's GHG emissions by 60% by 2030, Geneva prioritizes the reduction of buildings' energy needs and decarbonization of the energy supply, as follows:

- The Canton intends to reduce the consumption of fossil primary energy per capita by 55% by 2030, and to increase renewable energy supply, especially within district heating. For district heating, the Canton targets to bring the share of renewables and energy recovery to 80% of total. Sustainalytics notes that district heating expenditures financed under the Framework are expected to support the Canton in achieving the targets.
- Geneva aims at increasing buildings' energy efficiency to compensate for the increase in energy demand due to demographic and technological factors. By 2030, the Canton of Geneva anticipates 84,000 additional inhabitants compared to 2016.³⁴ Technological factors include increased electric vehicles adoption and a higher reliance on heat pumps for providing heating.
- The Canton of Geneva plans to increase renewable electricity generation. The Canton targets to increase solar PV generation from 68 MWh in 2019 to 350 MWh in 2030, while wind power and mini-hydro are expected to generate 50 GWh of additional production combined.

²⁹ Republic and Canton of Geneva, « Révision du dispositif de protection des mineurs », (2020), at : <https://www.ge.ch/document/revision-du-dispositif-protection-mineurs>

³⁰ See <https://www.transparency.org/en/cpi>.

³¹ Republic and Canton of Geneva, « Plan climat cantonal 2030 – 2^{ème} génération », (2021), at : <https://www.ge.ch/document/24973/telecharger>

³² In 2019. Swiss Government, "Énergie – faits et chiffres", at : <https://www.eda.admin.ch/aboutswitzerland/fr/home/wirtschaft/energie/energie---fakten-und-zahlen.html>

³³ SIG, "Electricity provided by SIG", (2018), at : <https://media.sig-ge.ch/documents/particuliers/electricite/Fiche-marquage-elc2019.pdf>

³⁴ Republic and Canton of Geneva, "Public Transport Action Plan 2020-2024", (2019), at : <https://www.ge.ch/document/17658/telecharger>

Sustainalytics notes that the projects funded under the Framework, such as district heating networks, renewable energy generation, or heat pumps, are expected to provide positive environmental benefits and assist the Canton of Geneva in meeting its GHG emissions reduction target.

Increasing affordable housing supply in the Canton of Geneva

As of 2020, Switzerland is experiencing rising property prices which is not in line with the household income thus creating potential systemic risks.³⁵ In 2019, 50% of all households in the lowest income quintile (bottom 20% of households) spent more than 40% of their income on housing. Furthermore, 42% of low-income households in Switzerland find meeting their housing needs “a heavy financial burden”.³⁶ COVID-19 has exacerbated inequality in Switzerland with very low-income households (less than 4,000 Swiss francs) having reported a substantial 20% drop in their income due to the pandemic which has led to a further demand for affordable housing segment in Switzerland.³⁷

Canton of Geneva has an acute housing shortage with demand exceeding supply, especially in the affordable housing segment. In 2018, only 18.5% of residents owned their homes in Geneva which is half the national average of 38.2% while the rest of the population is dependent on rental properties. Between 2004-2017, annual income has risen by 22% while the price of condominiums has risen exponentially by 140% in Geneva.³⁸ High housing costs, high health insurance premiums and above-average tax burden (in comparison to national average) make living in the Canton of Geneva expensive for average households and hence, the Canton of Geneva ranks at the bottom in the indicator of financial residential attractiveness for families in Switzerland.^{39,40} Sustainalytics is of the opinion that the use of proceeds to finance public utility housing to constitute at least 20% of the total rental stock will have positive social impacts by providing better access and increasing the number of public utility housing in the Canton of Geneva.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 by the United Nations General Assembly and form an agenda for achieving sustainable development by the year 2030. The bond(s) issued under the Sustainability Bond Framework advances the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Energy Efficiency - Construction	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Energy Efficiency - Renovation	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Public Transport	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

³⁵ UBS, “UBS Swiss Real Estate Bubble Index Q2 2020”, (2020), at: <https://www.ubs.com/global/en/wealth-management/chief-investment-office/market-insights/regional-outlook/2020/ubs-swiss-real-estate-bubble-index-august.html?caasID=CAAS-ActivityStream>

³⁶ Housing Europe, “The State of Housing in Europe 2021”, (2021), at: https://www.stateofhousing.eu/The_State_of_Housing_in_the_EU_2021.pdf

³⁷ ETH Zurich, “Coronavirus crisis is exacerbating inequality in Switzerland”, (2021), at: <https://kof.ethz.ch/en/news-and-events/media/press-releases/2021/02/Coronavirus-crisis-is-exacerbating-inequality-in-Switzerland.html>

³⁸ Swiss info, “Geneva’s property shortage continues to fuel exodus”, (2021), at: https://www.swissinfo.ch/eng/housing_geneva-s-property-shortage-continues-to-fuel-exodus/44374532

³⁹ Credit Suisse, “Affordable living? Places in Switzerland where you have the most disposable income”, (2021), at: <https://www.credit-suisse.com/ch/en/articles/private-banking/guenstig-wohnen-wo-sie-in-der-schweiz-am-meisten-einkommen-zur-freien-verfuegung-haben-202104.html>

⁴⁰ Swiss info, “Where to move in Switzerland to escape the high cost of living”, (2021), at: <https://www.swissinfo.ch/eng/where-to-move-in-switzerland-to-escape-the-high-cost-of-living/46647462>

Electric mobility	11. Sustainable Cities and Communities	11.6 Reduce adverse per capita environmental impact of cities
Access to Essential Services – Education	4. Quality education	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes 4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education
Public health	3. Good health and well-health	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
Access to essential services for migrants and refugees	10. Reduced inequalities	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
Integration of people with disabilities	10. Reduced inequalities	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status
Affordable Housing	11. Sustainable Cities and Communities	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Climate Action	13. Climate Action	13.2 Integrate climate change measures into national policies, strategies and planning

Conclusion

The Canton of Geneva has developed the Republic and Canton of Geneva Sustainability Bond Framework under which it may issue green, social and sustainability bonds and use the proceeds to finance and/or refinance, in whole or in part, existing and/or future projects that are expected to contribute to the environmental and social development of the Canton.

The Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the Republic and Canton of Geneva Sustainability Bond Framework is aligned with the overall sustainability strategy of the Canton of Geneva and that the use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals specifically SDG 3, 4, 7, 10, 11, and 13. Additionally, Sustainalytics is of the opinion that the Canton of Geneva has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Based on the above, Sustainalytics is confident that the Canton of Geneva is well-positioned to issue green, social and sustainability bonds and the Republic and Canton of Geneva Sustainability Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles (2021) and Social Bond Principles (2021).

Appendix

Appendix 1: Sustainability Bond / Sustainability Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Republic and Canton of Geneva
Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable:	Sustainability Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	November 19, 2021
Publication date of review publication:	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBP and SBP:

- | | |
|--|--|
| ☒ Use of Proceeds | ☒ Process for Project Evaluation and Selection |
| ☒ Management of Proceeds | ☒ Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| ☒ Consultancy (incl. 2 nd opinion) | ☐ Certification |
| ☐ Verification | ☐ Rating |
| ☐ Other (<i>please specify</i>): | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (*if applicable*)

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (if applicable):

The eligible categories for the use of proceeds – Energy Efficiency, Renewable Energy, Clean Transportation, Access to Essential Services, and Affordable Housing – are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental or social impacts and advance the UN Sustainable Development Goals, specifically SDG 3, 4, 7, 10, 11, and 13

Use of proceeds categories as per GBP:

- | | |
|--|--|
| ☒ Renewable energy | ☒ Energy efficiency |
| ☐ Pollution prevention and control | ☐ Environmentally sustainable management of living natural resources and land use |
| ☐ Terrestrial and aquatic biodiversity conservation | ☒ Clean transportation |
| ☐ Sustainable water and wastewater management | ☐ Climate change adaptation |
| ☐ Eco-efficient and/or circular economy adapted products, production technologies and processes | ☐ Green buildings |
| ☐ Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | ☐ Other (please specify): |

If applicable please specify the environmental taxonomy, if other than GBPs:

Use of proceeds categories as per SBP:

- | | |
|---|---|
| ☐ Affordable basic infrastructure | ☒ Access to essential services |
| ☒ Affordable housing | ☐ Employment generation (through SME financing and microfinance) |
| ☐ Food security | ☐ Socioeconomic advancement and empowerment |
| ☐ Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBP | ☐ Other (please specify): |

If applicable please specify the social taxonomy, if other than SBP:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

The process for evaluation and selection will be overseen by the Steering Group chaired by the Director General of Finance of the Canton of Geneva. The final approval of projects will be provided by the Conseil-ère d'Etat in charge of the Department of Finance and Human Resources. Sustainalytics considers the project selection process in line with market practice.

Evaluation and selection

- | | |
|---|---|
| ☒ Credentials on the issuer's social and green objectives | ☒ Documented process to determine that projects fit within defined categories |
| ☒ Defined and transparent criteria for projects eligible for Sustainability Bond proceeds | ☒ Documented process to identify and manage potential ESG risks associated with the project |
| ☒ Summary criteria for project evaluation and selection publicly available | ☐ Other (please specify): |

Information on Responsibilities and Accountability

- | | |
|--|--|
| ☒ Evaluation / Selection criteria subject to external advice or verification | ☐ In-house assessment |
| ☐ Other (please specify): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

The Finance and Human Resources Department as well as the General Treasury of the Canton, in charge of cantonal debt and centralized liquidity management, will be responsible for managing the proceeds under the Framework and overseeing the allocation to eligible projects. Canton of Geneva intends to reach full allocation within 24 months of issuance. Pending full allocation, unallocated proceeds will be included in the cash-pooling system of the general treasury and will not be used for any temporary financial investments. The Canton of Geneva's social and environmental policies as well as risk mitigation processes are applicable to all allocation decisions made under the Framework. Sustainalytics considers these risk management systems to be adequate. This is in line with market practice.

Tracking of proceeds:

- | |
|---|
| ☒ Sustainability Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| ☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| ☐ Other (please specify): |

Additional disclosure:

- | | |
|---|---|
| ☐ Allocations to future investments only | ☒ Allocations to both existing and future investments |
|---|---|

- | | |
|--|---|
| ☐ Allocation to individual disbursements | ☐ Allocation to a portfolio of disbursements |
| ☐ Disclosure of portfolio balance of unallocated proceeds | ☐ Other (please specify): |

4. REPORTING

Overall comment on section (if applicable):

The Canton of Geneva is committed to reporting on the allocation of proceeds, to be published on the Department of Finance and Human Resources' website annually. In addition, The Canton of Geneva is committed to reporting on the relevant impact metrics, such as number of beneficiaries, and avoided/reduced GHG emissions. Sustainalytics views the allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

- | | |
|--|--|
| ☐ Project-by-project | ☒ On a project portfolio basis |
| ☐ Linkage to individual bond(s) | ☐ Other (please specify): |

Information reported:

- | | |
|--|---|
| ☒ Allocated amounts | ☐ Sustainability Bond financed share of total investment |
| ☒ Other (please specify): <i>share of financing vs refinancing activities, balance of unallocated proceeds</i> | |

Frequency:

- | | |
|--|--------------------------------------|
| ☒ Annual | ☐ Semi-annual |
| ☐ Other (please specify): | |

Impact reporting:

- | | |
|--|--|
| ☐ Project-by-project | ☒ On a project portfolio basis |
| ☐ Linkage to individual bond(s) | ☐ Other (please specify): |

Information reported (expected or ex-post):

- | | |
|---|--|
| ☒ GHG Emissions / Savings | ☐ Energy Savings |
| ☐ Decrease in water use | ☒ Number of beneficiaries |
| ☐ Target populations | ☒ Other ESG indicators (please specify): other indicators which will be defined in a published methodology |

Frequency:

- ☒ Annual ☐ Semi-annual
☐ Other (please specify):

Means of Disclosure

- ☒ Information published in financial report ☐ Information published in sustainability report
☐ Information published in ad hoc documents ☐ Other (please specify):
☒ Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): an external verification will be performed by a third-party auditor (Canton's Court of Auditors) covering (i) the allocation of proceeds and (ii) the impact reporting.

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

<http://www.ge.ch/finances>

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- ☐ Consultancy (incl. 2nd opinion) ☐ Certification
☐ Verification / Audit ☐ Rating
☐ Other (please specify):

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP

- i. Second-Party Opinion: An institution with sustainability expertise that is independent from the issuer may provide a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Sustainability Bond framework, or appropriate procedures such as information barriers will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy, and/or processes relating to sustainability and an evaluation of the environmental and social features of the type of Projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or sustainability criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally or socially sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Sustainability Bond proceeds, statement of environmental or social impact or alignment of reporting with the Principles may also be termed verification.

-
- iii. **Certification:** An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against a recognised external sustainability standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
 - iv. **Green, Social and Sustainability Bond Scoring/Rating:** An issuer can have its Sustainability Bond, associated Sustainability Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental and/or social performance data, process relative to the Principles, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material sustainability risks.

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