

Second-Party Opinion

Alphabet Sustainability Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the Alphabet Sustainability Bond Framework is credible and impactful and aligns with the Sustainability Bond Guidelines 2018. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds Energy Efficiency, Clean Energy, Green Buildings, Clean Transportation, Circular Economy and Design, Affordable Housing, Commitment to Racial Equity, Support for Small Businesses and COVID-19 Crisis Response, are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that the eligible categories will lead to positive environmental or social impacts and advance the UN Sustainable Development Goals, specifically SDG 1, 3, 4, 7, 8, 10, 11, 12, and 15.



PROJECT EVALUATION / SELECTION Alphabet Inc. has formed an internal committee with representatives from different departments for evaluating and selecting projects and the final approval responsibility is entrusted with the Google Sustainability Officer. Sustainalytics considers the project selection process to be aligned with market practice.



MANAGEMENT OF PROCEEDS Alphabet will rely on its internal tracking systems managed by the Finance department and invest net proceeds in liquid securities such as cash, equivalents, and US Government securities pending allocation. This is in line with market practice.



REPORTING Alphabet Inc. intends to report allocation proceeds on its website on an annual basis until full allocation. The report will include allocations made towards Eligible Projects on a category basis and, where feasible, on a project basis. In addition, Alphabet Inc. is committed to reporting on relevant impact metrics. Sustainalytics views Alphabet Inc.'s allocation and impact reporting as aligned with market practice.

Evaluation date	July 31, 2020
Issuer Location	Mountain View, California, United States

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Introduction

Alphabet Inc. (“Alphabet” or the “Issuer”) is an American internet software and services company known primarily as the parent company of Google (together with Alphabet, the “Company”). Founded in 2015 as a result of corporate restructuring, Alphabet is one of the world’s largest technology firms as well as among the most valuable public companies.

The Company has developed the Alphabet Sustainability Bond Framework (the “Framework”) under which it intends to issue sustainability bond(s) and use the proceeds to finance and/or refinance, in whole or in part, existing and future projects that improve the environmental performance of the Company’s operations and supports positive social outcomes in communities in which the Company operates (“Eligible Projects”). The Framework defines eligibility criteria in eight areas:

1. Energy Efficiency
2. Clean Energy
3. Green Buildings
4. Clean Transportation
5. Circular Economy and Design
6. Affordable Housing
7. Commitment to Racial Equity
8. Support for Small Businesses and COVID-19 Crisis Response

The Company engaged Sustainalytics to review the Alphabet Sustainability Bond Framework, dated 2020, and provide a second-party opinion on the Framework’s environmental and social credentials and its alignment with the Sustainability Bond Guidelines 2018 (SBG).¹ This Framework has been 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 categories are credible and impactful.

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

- The Framework’s alignment with the Green Bond Principles 2018, Social Bond Principles 2020, and Sustainability Bond Guidelines 2018, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds;
- The alignment of the issuer’s sustainability strategy, sustainability 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 1.4, which is informed by market practice and Sustainalytics’ expertise as an Environmental, Social, and Governance (ESG) research provider.

As part of this engagement, Sustainalytics held conversations with various members of the Company’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. The Company representatives have confirmed (1) they understand it is the sole responsibility of the Company to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics 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.

¹ The Sustainability Bond Guidelines 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 Alphabet Sustainability Bond Framework is available on Alphabet Inc.’s website at: <https://abc.xyz/investor/static/pdf/SustainabilityBondFramework2020.pdf>

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.

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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 Company.

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 intended 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 Alphabet has made available to Sustainalytics for the purpose of this SPO.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Alphabet Sustainability Bond Framework

Sustainalytics is of the opinion that the Alphabet Sustainability Bond Framework is credible, impactful and aligns with the four core components of the Green Bond Principles 2018 (GBP) and Social Bond Principles 2020 (SBP). Sustainalytics highlights the following elements of Alphabet's Sustainability Bond Framework:

- Use of Proceeds:
 - The eligible green categories – Energy Efficiency, Clean Energy, Green Buildings, Clean Transportation, and Circular Economy and Design – are aligned with those recognized by the GBP and the eligible social categories – Affordable Housing, Racial Equity, and Support for Small Businesses and COVID-19 Response – are aligned with those recognized by the SBP.
 - For the Energy Efficiency category, Google intends to finance expenditures in energy-efficient Information Technology (IT) facilities and infrastructure, including data centers, as well as server, storage, or networking efficiency and utilization.
 - Eligible data centres are defined as those with a Power Usage Effectiveness (PUE) less than 1.5, which Sustainalytics considers to be aligned with market practice. Sustainalytics notes positively that Google has a sound history of operating energy-efficient data centres with a portfolio average PUE of less than 1.5 since 2008 across all locations globally and, in the most recent quarter, reported an average trailing twelve-month PUE of 1.11.⁴
 - Regarding expenditures related to “server, storage, or networking efficiency and utilization”, Sustainalytics considers the financing of specific projects with anticipated energy efficiency improvements to be aligned with market expectation and encourages Alphabet to prioritize projects with quantifiable energy performance benefits.
 - For the Clean Energy category, the Company may finance expenditures in renewable energy projects namely Power Purchase Agreements (PPAs), on-site renewables, or equity investment commitments in renewable energy projects.

⁴ Google website, Data Centers: Efficiency <https://www.google.com/about/datacenters/efficiency/>

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- Sustainalytics views solar, wind, hydro,⁵ geothermal,⁶ and biomass⁷ with the criteria included in the Framework to be aligned with market practice.
- PPAs financed will be long-term and tied to specific projects, which Sustainalytics considers to be in line with market expectations. Sustainalytics further notes that each project must also meet Google's criteria of additionality.⁸
- For the Green Buildings category, Google intends to finance the design, construction, and improvement of office spaces and surrounding communities, including investments in:
 - Office buildings with third-party sustainability certifications such as LEED or Living Building Challenge. Sustainalytics considers the schemes cited to be credible and the levels selected (LEED Gold and higher) to be robust. Refer to Appendix 1 for information on certification schemes.
 - Design and implementation of projects under Google's Ecology Program, which focuses on expanding wildlife habitat, creating climate-resilient landscapes, and restoring ecological functions lost due to urban development. Since the launch of the program in 2014, Google has completed two projects while one is currently underway.⁹
- For the Clean Transportation category, Alphabet may finance expenditures related to procurement, maintenance and operation of electric vehicles and bicycles and associated infrastructure including EV charging stations and bike sharing programs. Sustainalytics considers the financing of electrified and active transportation to be aligned with market practice.
- Within the Circular Economy and Design category, Google intends on financing projects focused on increasing use of recycled and sustainable materials (such as in consumer hardware devices), increasing the supply of more sustainable materials, and reducing waste generation from the construction and operation of its facilities.¹⁰ Sustainalytics views end-of-life management and energy/emissions intensity to be key considerations related to sustainable materials, and overall views positively the Framework's intentions in these areas, noting the importance of recycled materials as part of a transition to a circular economy.
 - The Issuer has disclosed its current focus on expanding the use of post-consumer recycled (PCR) plastic in consumer hardware devices. By using recycled plastic in its products, Google is both able to reduce its need for virgin plastics, as well as make use of existing PCR materials. It is highlighted in particular that the utilization of recycled plastic in consumer durables extends the material lifecycle, and therefore poses a less severe end-of-life management challenge.
- Within the Affordable Housing category, Google intends to finance the cost of land and financial investments in affordable housing. These investments form part of a plan to create 20,000 new homes in the Bay Area region.¹¹
 - In addition to providing financial support through an investment fund, Google intends to repurpose existing land owned by Google for the purpose of construction of market rate and affordable housing units. This may be carried out through long-term land leases or occasionally through outright transfers. The Company may also explore participation models, but overall does not intend to be the primary operator of housing projects. Sustainalytics recognizes that the provision of land for affordable housing is an important part of developing new housing units, and therefore considers this category to have positive social impacts.
 - The Issuer has specified that its plan is to support housing available to a range of incomes levels, focused primarily on those earning less than 120% of Area Median

⁵ The Framework specifies that only facilities under 20MW in size are eligible. Sustainalytics views restriction on maximum capacity to be aligned with market practice.

⁶ The Framework specifies that only facilities with direct emissions of less than 100g CO₂/kWh are eligible. This threshold is aligned with those defined by the Climate Bonds Initiative and the EU Taxonomy for Sustainable Finance.

⁷ The Framework specifies that waste feedstock utilized in biomass energy plants will neither be derived from sources of high biodiversity nor deplete carbon pools. Sustainalytics considers this to be aligned with market practice.

⁸ The Company defines "additionality" as meaning two things: First, the Company seeks to purchase energy only from newly constructed generation facilities or expansion of existing projects and second, these facilities must produce renewable energy above and beyond regulatory requirement (e.g. state Renewable Portfolio Standards). For more detail refer to: <https://storage.googleapis.com/gweb-sustainability.appspot.com/pdf/renewable-energy.pdf>

⁹ For details on the projects undertaken since the launch of the program in 2014, see: <https://sustainability.google/projects/urban-ecology>

¹⁰ These expenditures are a part of Google's commitment to reduce waste from its operations and include recycled material in all Made by Google products by 2022.

¹¹ Google website: Company Announcements, "\$1 billion for 20,000 Bay Area homes", published July 2019 at: https://blog.google/inside-google/company-announcements/1-billion-investment-bay-area-housing/?_ga=2.155395000.248115741.1594171932-715083871.1587163224

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- Income (AMI). While purely affordable housing often focuses on 80% AMI or lower, given the high cost of housing in the Bay Area as well as the associated severity of the housing crisis and the lack of workforce housing, Sustainalytics recognizes the social benefit of this approach.
- Sustainalytics notes that Google's commitments towards addressing the affordable housing crisis in California are aligned with the Governor's call to corporate leaders in November 2019 to help address the issue of workforce housing.
 - Recognizing the systemic barriers and disadvantages often faced by the Black+ community, as part of the Commitment to Racial Equity category, Google intends to finance initiatives, including participation in capital firms, and partnerships that directly or indirectly support small and medium business¹² with Black owners and communities, startup-founders, job seekers, creators and developers. Sustainalytics considers, broadly, the variety of expenditures contemplated by the Framework to be aligned with the SBP category of Socioeconomic Advancement and Empowerment.
 - Proceeds from the sustainability bond may be allocated to financing and funding participation for small businesses serving the Black community and for Black-led startups. Sustainalytics considers this financing to be aligned with market practice in providing positive impact for a target population.
 - Proceeds may also be allocated to programs which provide job training, skills development, and access to opportunities for target populations. In addition, Google has established the YouTube Black Creators Fund,¹³ which may be financed in part by bond proceeds, and is intended to provide a platform to showcase Black creators and perspectives. Sustainalytics anticipates that these initiatives will deliver positive social impacts, and therefore considers them to be aligned with market practice, noting in particular that Black Creators fund will provide benefits both directly for the creators whose work is amplified, as well as by bringing to the forefront important perspectives on racial issues.
 - In addition to directly funding startups and small businesses, the Framework allows for financing of Black-led 'capital firms' that invest in startups and small businesses with growth potential. While the financing of large firms is not generally in line with market practice, Sustainalytics recognizes that the financing provided will enhance the access to capital for entrepreneurs and the startup ecosystem, as well as the barriers faced by members of the Black community, especially as it relates to tech and finance and the importance of promoting diversity in leadership roles. Furthermore, while it is noted positively that the intent of this initiative is to provide greater opportunities for individuals who have historically faced barriers to venture capital, participation in Black-led capital firms does not by definition provide assurances of this outcome, and Sustainalytics therefore encourages participation in firms with a stated mandate in this area.
 - Sustainalytics views positively that activities within this category will be delivered in partnership with credible organizations such as the Opportunity Finance Network, a network of Community Development Financial Institutions focused on lending to markets that are not well-banked by the conventional financial system.
 - Within the category of Support for Small Businesses & COVID-19 Crisis Response, Google intends on extending support to Small- and Medium-sized Business (SMBs) affected by COVID-19, as well as health organizations, governments, and health workers at the front line of the pandemic. Investments may include an SMB loan fund to improve access to capital.
 - Sustainalytics notes that SMBs have been affected by the economic recession triggered by COVID-19 and considers Google's efforts to help mitigate these effects to have positive social outcomes.
 - Sustainalytics recognizes the expected positive impact of Google supporting and subsidizing the dissemination of critical information from health organizations and local governments.
 - Project Evaluation and Selection:

¹² The Company defines small and medium businesses based on spending thresholds, which aligns with the internal sales teams which serve the market segment.

¹³ YouTube Official Blog, Susan Wojcicki: My mid-year update to the YouTube community, published June 2020 at: <https://youtube.googleblog.com/2020/06/susan-wojcicki-mid-year-update-2020.html>

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- Alphabet has formed a committee comprising members from its Sustainability, Treasury, and Finance teams who shall be responsible for assessment and selection of projects in accordance with the Framework.
- The Company's Sustainability Officer is responsible for final review and approval of Eligible Projects.
- Sustainalytics considers the Company's well-defined process and committee for project evaluation and selection to be aligned with market practice.
- Management of Proceeds:
 - Proceeds will be tracked by the Company's existing internal tracking systems that are managed by the Finance department.
 - Pending allocation, net proceeds will be held in liquid securities such as cash, equivalents, and U.S. Government securities.
 - Based on the presence of internal tracking systems and disclosure on temporary allocation of proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
 - Alphabet intends on reporting on allocations made towards Eligible Projects on a category basis and, where feasible, on a project basis, annually until full allocation. This report will be accompanied with a Management assertion regarding allocations to Eligible Projects and a report from a third-party providing assurance that allocations have been made in compliance with the Framework.
 - The report will also include disclosure on relevant quantitative impact metrics for each category that Google has defined in the Framework.
 - Based on Alphabet's commitment to allocation and impact reporting on an annual basis, Sustainalytics considers this process to be in line with market practice.

Alignment with Sustainability Bond Guidelines 2018

Sustainalytics has determined that the Alphabet Sustainability Bond Framework aligns to the Sustainability Bond Guidelines (2018), and to four core components of the Green Bond Principles (2018) and Social Bond Principles (2020). For detailed information please refer to Appendix 2: Sustainability Bond/ Sustainability Bond Programme External Review Form.

Section 2: Sustainability Strategy of Alphabet

Contribution of Framework to Alphabet Inc.'s sustainability strategy

Google has a robust sustainability strategy, in addition to a history of setting and achieving key targets for climate action. The following indicative list of projects demonstrates Google's track record of performance and commitments related to the environmental and social areas outlined in the Use of Proceeds section of the Framework.

- Google is the world's largest corporate purchaser of renewable energy. It has a history of facilitating capital inflows to the renewable energy sector, and has made noteworthy contributions to developing industry best practices such as innovative models for purchasing power from renewable sources. At an operational level, in 2018, Google reached twelve consecutive years of carbon neutrality and in 2019, its third consecutive year of matching 100% of its electricity consumption with an equivalent purchase of energy from renewable sources.^{14,15}
- In September 2019, Google announced a landmark deal to purchase 1.6 GW of renewable energy capacity from 18 renewable energy projects in the U.S., Chile, and Europe. The deal will reportedly drive investments of over \$2 billion in construction of new renewable energy infrastructure.¹⁶

¹⁴ Google website, Google Environment Report 2019, published September 2019 at: http://services.google.com/fh/files/misc/google_2019-environmental-report.pdf

¹⁵ Google website: Data Centers and Infrastructure, "Our data centers now work harder when the sun shines and the wind blows" published April 2020 at: <https://www.blog.google/inside-google/infrastructure/data-centers-work-harder-sun-shines-wind-blows/>

¹⁶ Google website: Sustainability, "Our biggest renewable energy purchase ever", published September 2019 at: <https://www.blog.google/outreach-initiatives/sustainability/our-biggest-renewable-energy-purchase-ever/>

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- Since 2010, Google has committed to invest nearly \$2.5 billion in equity commitments for renewable energy projects. Through targeted investments in such projects, Google takes the positive environmental impact associated with renewable energy beyond its operational footprint and enables climate action through deployment of large-scale renewable energy projects and residential solar rooftop funds.¹⁷
- Google effectively deploys tools and technologies such as advanced cooling techniques, smart temperature controls, and machine learning to improve energy efficiency at its data centers. Currently, Google's data centers use about six times less overhead energy (for lighting, cooling, and power distribution) than the industry average and are twice as energy efficient as a typical enterprise data center.¹⁸
- Google continues to integrate its commitment to reduce waste into its business and has set a target of including recycled material in all Made by Google products by 2022. Google already includes recycled plastic in its 2019 Nest product line and is a technology partner for the Ellen MacArthur Foundation's New Plastics Economy Initiative, which brings together over 850 businesses, governments, and organizations behind a common vision for a circular economy for plastic.¹⁹
- In June 2019, Google committed \$1 billion towards developing 20,000 homes in the Bay Area to be deployed over the next 10 years by repurposing \$750 million of company-owned land originally held for office space, and making a \$250 million investment commitment to provide incentives for housing developers to build affordable housing units.²⁰
- Google made strong commitments to racial equity, including a goal of a 30% increase in underrepresented groups in leadership positions, improving its internal hiring policies to eliminate racial bias, and supporting initiatives for the well-being of its Black+ employees. Beyond its operations, Google announced a \$175 million commitment focused on promoting economic opportunities for Black business owners and businesses serving Black communities, Black startup founders, job seekers, and developers. This is in addition to YouTube's \$100 million fund to amplify Black content creators and artists.²¹
- In response to the economic crisis triggered by COVID-19, Google announced an \$800 million commitment to help SMBs, health organizations and governments, and health workers. These initiatives have been highlighted in the Framework.

Based on demonstrated commitments and success of programs enlisted above, Sustainalytics is of the opinion that the Alphabet Sustainability Bond Framework is aligned with the Company's overall sustainability strategy and will further the Company's action on its key environmental and social priorities.

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

While Alphabet's use of proceeds categories are intended to finance green and/or social projects that are anticipated to have overall positive impacts, Sustainalytics recognizes that there exist environmental and social risks which could be associated with the financing provided. Some key environmental and social risks associated with the eligible projects could include occupational health and safety, land use and biodiversity issues associated with large-scale infrastructure development, waste generated in construction and manufacturing, and ensuring appropriate targeting of social programs outlined in the Framework. Although Alphabet has a limited role to play in the execution and development in some of the individual projects financed, Sustainalytics considers the following mechanisms that the Company has devised and placed to be adequate to mitigate these concerns:

- The Google Code of Conduct delineates responsibility to all its employees to operate with integrity, understand and operate in compliance with key legal requirements and prohibitions, and preserve company and partner information confidentiality.

¹⁷ Google website: Google Environmental Report 2019, page 29

¹⁸ Google website: Google Environmental Report 2019, pages 19-20

¹⁹ Google website: Sustainability, "Uniting to address plastic waste and pollution", published December 2019 at: <https://www.blog.google/outreach-initiatives/sustainability/uniting-address-plastic-waste-and-pollution/>

²⁰ Google website: Company Announcements, "\$1 billion for 20,000 Bay Area homes", published July 2019 at: https://blog.google/inside-google/company-announcements/1-billion-investment-bay-area-housing/?_ga=2.155395000.248115741.1594171932-715083871.1587163224

²¹ Google website: A message from our CEO, "Our commitments to racial equality", published June 2020 at: <https://blog.google/inside-google/company-announcements/commitments-racial-equity/>

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- Google expects all its suppliers to comply with its Supplier Code of Conduct, which requires suppliers to incorporate health and safety management requirements into their business practices and comply with all applicable laws and regulations.
- The Supplier Code of Conduct also requires suppliers to strive to minimize adverse effects on the community, environment and natural resources by mandating them to obtain all applicable environmental permits and approvals, and to follow operational and reporting requirements.
- Suppliers are also required to identify and manage chemicals and other materials that pose hazard to the environment, and ensure safe handling, use, storage and disposal. Suppliers must work to reduce and eliminate waste of all types and where it cannot be eliminated, manage and control all waste streams in compliance with applicable laws and in an environmentally responsible way.
- Google is analyzing its internal people and talent processes, and is committed to redesigning them to eliminate any racial biases through cross-functional employee engagement groups and feedback from employees belonging to minority groups.
- Google continues to establish training modules that delve into details about systemic racism and inequalities and is integrating such programs into the mandatory training requirements for managerial employees.
- Specifically for affordable housing, Google recognizes the severity of the problem and its impact beyond its employees as well as the tech community. Investments within this category are targeted at populations defined by sector-agnostic criteria of income levels and are supplemented with collaboration across businesses, government and organizations focused on engagement at a broader community level.

Additionally, Sustainalytics' research service has assessed Alphabet as currently being exposed to a Category 4 (High) controversy related to Customer Incidents. Sustainalytics notes that the eligible projects that will be financed by the sustainability bonds are largely unrelated to the antitrust irregularities noted above.

Based on these policies, standards and assessments, Sustainalytics is of the opinion that Google 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 eight use of proceeds categories are aligned with those recognized by GBP or SBP. Sustainalytics has focused on five below where the impact is specifically relevant in the local context.

Importance of Energy-Efficient IT Operations

Google will allocate bond proceeds to design, construct, operate and maintain energy-efficient facilities and infrastructure, including energy-efficient data centers. This is of particular importance because data centers are massive consumers of energy and in 2018 accounted for approximately 2% of global energy consumption.²² Due to increasing use of technology, the amount of data being stored globally more than doubles every four years.²³ Thus, it is increasingly important for data centers to be equipped with energy efficient technology. As the importance of energy-efficient data centers increases alongside consumer dependency on networks and data, Sustainalytics sees energy reductions at data centers as essential to decreasing the footprint of the ICT sector.

Impacts of Renewable Energy

In recognition of the role that greenhouse gas ("GHG") emissions play in global warming and the current climate crisis, since 2007, Google has engaged in activities to promote carbon neutral operations, including focusing on purchasing renewable energy from wind and solar sources to match electricity use of its operations. After achieving the target of procuring enough clean energy to meet its annual needs in 2017, this

²² PRWeb, "Data Centers Consume 2% of World's Energy—Hyper-Efficient New Solutions Usher in New Paradigm", (2018), at: http://www.prweb.com/releases/data_centers_consume_2_of_worlds_energy_hyper_efficient_new_solutions_usher_in_new_paradigm/prweb15925619.htm

²³ Pearce, Fred. "Energy Hogs: Can Data Centers be Made More Efficient?" (2018) at <https://e360.yale.edu/features/energy-hogs-can-huge-data-centers-be-made-more-efficient>

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commitment is now headlined by an effort to work towards sourcing carbon-free energy on a 24x7 basis over time, not relying on fossil-fuel-power electricity to bridge gaps in the availability of renewables.²⁴

Through the focus on renewable energy, Alphabet is viewed by Sustainalytics as taking a comprehensive and credible approach to its climate impacts.

The Need for Affordable Housing in California and the Bay Area

The lack of affordable housing is a substantial problem in the United States and particularly in the state of California. More than 3 million households in California spend greater than 30% of their income on rent, with more than 1.5 million households spending more than 50%.²⁵ Amongst regions in California, median home prices are the highest in the San Francisco Bay Area.²⁶ While homelessness declined in most states in the US between 2018 and 2019, California reported a 16% increase during the same period, contributing to a national increase in homelessness by 3%. Over 151,000 people experienced homelessness in California in 2019, representing ~27% of the national total despite being home to only ~12% of the country's population.²⁷ Furthermore, studies have shown that housing poverty leads to negative social outcomes across multiple dimensions as families and individuals are compelled to make trade-offs between spending on housing and spending on other essentials such as food, healthcare, and transportation.²⁸

Overcoming California's severe housing crisis entails significant investment in projects with positive social impact. The State has already directed \$3 billion to combat homelessness in the last two years and the Governor has requested an additional \$1.4 billion this year to tackle this problem.²⁹ In addition to this direct funding, housing development at the level required will also require private-sector investment. In this context, Sustainalytics views investment in subsidized and affordable housing projects in the state of California as having a positive impact on the community.

Google's Commitment to Racial Equity

The barriers and disadvantages faced by the Black community in the U.S. are longstanding and deep-rooted. Systemic racism is ingrained across the institutions, policies and practices that inform society and everyday life, creating disparities across racial lines in the school system, workforce, law, policing and others. As a result, Black individuals and communities experience these systems differently and may not be privileged to the same opportunities as their white counterparts. For instance, of Americans over the age of 25, 41% of the white population are employed in professional and management roles, the highest paying occupational category, compared to 31% of the Black population.³⁰ Black communities also face higher rates of unemployment, lower rates of post-secondary education and higher rates of criminal conviction.³¹ Recent mass protests across the United States and the world have brought this systemic racism and racial inequality that Black communities have faced to the center of public discourse. Over recent months, public attention has once again been drawn to these issues, and while the problems that must be addressed are not novel, the protests and discourse that have arisen have reinforced the need for individuals and corporations to take action.

Thus, it is important and impactful for corporations such as Alphabet to attempt to address racial inequality and disparities within their organizations as well as to contribute to the expansion of opportunities available to Black communities. In response, Alphabet made a series of internal and external commitments which it

²⁴ Google website: Sustainability, "The Internet is 24x7—carbon-free energy should be too" published at: <https://sustainability.google/projects/24x7/>

²⁵ California Department of Housing and Community Development, "California's Housing Future: Challenges and Opportunities", https://www.calco.org/clientuploads/Resources/Housing/SHA_Final_Combined.pdf

²⁶ California Association of Realtors, "Current Sales and Price Statistics" at <https://www.car.org/marketdata/data/countysalesactivity>

²⁷ The US Department of Housing and Urban Development, "The 2019 Annual Homeless Assessment Report to Congress", <https://files.hudexchange.info/resources/documents/2019-AHAR-Part-1.pdf>, World Population Review, <https://worldpopulationreview.com/states/california-population/>

²⁸ CityLab, "For Low-Income Renters, the Affordable Housing Gap Persists", <https://www.citylab.com/equity/2018/03/for-low-income-renters-the-gap-in-affordable-housing-persists/555458/>

²⁹ Lozano, Alicia V., "California governor seeks \$1.4 billion to combat homelessness as crisis grows" <https://www.nbcnews.com/news/us-news/california-governor-seeks-1-4-billion-combat-homelessness-crisis-grows-n1113926>

³⁰ US Bureau of Labor Statistics, BLS Reports October 2019 published at: <https://www.bls.gov/opub/reports/race-and-ethnicity/2018/home.htm#:~:text=The%20employment%E2%80%93%20population%20ratio%20was, and%2063.2%20percent%20for%20Hispanics.>

³¹ Ibid.

³² The Sentencing Project, "UN Report on Racial Disparities", published April 2018 at: <http://www.sentencingproject.org/publications/un-report-on-racial-disparities/>

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intends to help drive “lasting, meaningful change”.³³ These initiatives include providing programs to support racial equality including increasing Black representation in management and hiring practices, training, funding for Black-led businesses and businesses supporting Black communities, and increased access to opportunities. Alphabet will also utilize its products and platforms to assist and amplify Black voices. Overall, these projects are anticipated to deliver positive impacts.

Importance of establishing a circular economy for plastics

The problem of plastic pollution has reached a catastrophic scale with a rapid growth in plastic production and minimal and insufficient efforts towards recycling. Since 1950, global production of resins and fibers increased by 8.4% per year, reaching 380 Mt, outpacing global GDP growth during the same period. More than half of the total 7,800 Mt manufactured to date was made within the last 13 years. Further, as of 2015, only 9% of the total plastic waste generated had been recycled and 12% had been incinerated while the remaining 79% has accumulated in our landfills or in the environment.³⁴

Plastics often contain additives that makes them difficult to break down, with estimates suggesting that some plastics may take as long as 400 years to decompose.³⁵ As plastics continue to accumulate in our environment, they gradually make their way downstream into our oceans where they can kill aquatic life through entanglement in objects or through ingestion. By 2018, microplastics have been found in the organs of 114 aquatic species including some found in the deepest trenches of the ocean and that eventually make their way into our bodies through the food chain.³⁶ An average person could be ingesting up to 5 grams of plastic every week, equivalent of one credit card.³⁷ If this continues unabated, annual flow of plastics will nearly triple by 2040 and lead to massive health consequences as well as financial liabilities associated with potential legislation around recycling and waste management.³⁸

In response to the problem, two bills – the Break Free from Plastic Pollution Act of 2020 and the Plastic Waste Reduction and Recycling Act – have recently been introduced in the U.S. Congress, focusing on reduction of single-use plastic, creating new standards for reducing and recycling plastic waste, and establishing a waste reduction research program.^{39,40} Large U.S.-based technology companies are also seeking to address this problem, with some companies committing to reducing or eliminating the use of single-use plastic in their packaging by 2025.^{41,42}

Google’s commitments in this regard have been focused on building a circular economy for plastic by gradually incorporating PCR plastic into its consumer hardware devices. This entails investments along the entire supply chain as well as in manufacturing infrastructure to effectively recycle plastic.⁴³ In this context, Sustainalytics considers investments in the category of Circular Economy and Design to lead to positive environmental outcomes.

³³ Google website: A message from our CEO, “Our commitments to racial equity” published June 2020 at: <https://blog.google/inside-google/company-announcements/commitments-racial-equity/>

³⁴ Geyer, Jambeck, Lavender Law, “Production, use, and fate of all plastics ever made” published July 2017 at: <https://advances.sciencemag.org/content/3/7/e1700782.full>

³⁵ National Geographic report, “The world’s plastic pollution crisis explained” at: <https://www.nationalgeographic.com/environment/habitats/plastic-pollution/#:~:text=Plastic%20pollution%20has%20become%20one,ability%20to%20deal%20with%20them.&text=Plastic%20trash%20has%20become%20so,negotiated%20by%20the%20United%20Nations.>

³⁶ Encyclopedia Britannica, “Plastic Pollution In Oceans And On Land” at: <https://www.britannica.com/science/plastic-pollution/Plastic-pollution-in-oceans-and-on-land>

³⁷ WWF Analysis, “No Plastic in Nature: Assessing Plastic Ingestion From Nature to People” published in 2019 at: https://www.wwfse.cdn.triggerfish.cloud/uploads/2019/06/dalberg-advocacy-analysis_for-web.pdf

³⁸ PEW Charitable Trust and SystemIQ research, “Breaking the Plastic Wave”, published 23 July 2020 at: https://www.systemiq.earth/wp-content/uploads/2020/07/BreakingThePlasticWave_SummaryReport.pdf

³⁹ Congresswoman Haley Stevens website, “Stevens Introduces Bipartisan Legislation to Reduce Plastic Waste” published June 2020 at: <https://stevens.house.gov/media/press-releases/stevens-introduces-bipartisan-legislation-reduce-plastic-waste>

⁴⁰ Congress website, “Break Free From Plastic Pollution Act 2020” at: <https://www.congress.gov/bill/116th-congress/house-bill/5845>

⁴¹ Forbes website, “HP Leads by Example with Big-Time strides in Sustainability” published July 2020 at:

<https://www.forbes.com/sites/moorinsights/2020/07/03/hp-leads-by-example-with-big-time-strides-in-sustainability/#2e0f5f5a4bf1>

⁴² iMore report, “Unpacking Apple’s mammoth carbon neutral commitment and its new environmental vision” published July 2020 at: <https://www.imore.com/unpacking-apples-mammoth-carbon-neutral-commitment-and-its-environmental-vision>

⁴³ Google website: Sustainability, “Partnering with suppliers to create better recycled plastic” at: <https://sustainability.google/projects/plastics/>

Alphabet Sustainability Bond Framework

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This sustainability bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Energy Efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Clean Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Green Buildings	11. Sustainable Cities and Communities	11. 3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
	15. Life on Land	15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
Clean Transportation	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
Circular Economy and Design	12. Responsible Consumption and Production	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Affordable Housing	1. No Poverty	1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions
	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 according to national definitions.
Commitment to Racial Equity	4. Quality Education	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
	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
Support for Small Businesses & COVID-19 Crisis Response	3. Good Health and Well-being	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
	8. Decent work and Economic growth	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

Alphabet Sustainability Bond Framework

Conclusion

Alphabet has developed the Alphabet Sustainability Bond Framework under which it may issue sustainability bonds and use the proceeds to finance projects in eight categories namely Energy Efficiency, Clean Energy, Green Buildings, Clean Transportation, Circular Economy and Design, Affordable Housing, Commitment to Racial Equity, Support for Small Businesses and COVID-19 Crisis Response. Sustainalytics considers that the projects funded by the sustainability bond proceeds will provide positive environmental and social impact.

The Alphabet Sustainability Bond 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 Alphabet Sustainability Bond Framework is aligned with the overall sustainability strategy of the company and that the use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals 1, 3, 4, 7, 8, 10, 11, 12, and 15. Additionally, Sustainalytics is of the opinion that Google 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 Alphabet Inc. is well-positioned to issue sustainability bonds and that that Alphabet Sustainability Bond Framework is robust, transparent, and in alignment with the Sustainability Bond Guidelines (2018) and the four core components of the Green Bond Principles (2018) and Social Bond Principles (2020).

Appendices

Appendix 1: Green Building Certification Schemes

	LEED ⁴⁴	Living Building Challenge ⁴⁵
Background	Leadership in Energy and Environmental Design (LEED) is a US Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC) and covers the design, construction, maintenance and operation of buildings.	The Living Building Challenge is an international green building certification program and sustainable design framework run by the International Living Future Institute, a US non-profit organization seeking to tackle climate change by pushing for a built urban environment free of fossil fuels.
Certification levels	Certified Silver Gold Platinum	Zero Energy Certification Petal Certification Living Building Certification
Areas of Assessment	<ul style="list-style-type: none"> • Energy and atmosphere • Sustainable Sites • Location and Transportation • Materials and resources • Water efficiency • Indoor environmental quality • Innovation in Design • Regional Priority 	<ul style="list-style-type: none"> • Place • Water • Energy • Health and Happiness • Materials • Equity • Beauty
Requirements	<p>Prerequisites (independent of level of certification) + Credits with associated points</p> <p>These points are then added together to obtain the LEED level of certification</p> <p>There are several different rating systems within LEED. Each rating system is designed to apply to a specific sector (e.g. New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-/Healthcare New Construction and Major Renovations, Existing Buildings: Operation and Maintenance).</p>	<p>The Living Building Challenge is organized into seven performance areas called Petals. Each Petal is further sub-divided into Imperatives, which address specific issues through detailed requirements.</p> <p>All Imperatives assigned to a Typology are mandatory.</p> <p>Living Building Challenge certification requires actual, rather than anticipated, performance demonstrated over twelve consecutive months.</p>
Performance display		

⁴⁴ USGBC, LEED: www.usgbc.org/LEED

⁴⁵ International Living Future Institute, Living Building Challenge Certification: <https://living-future.org/lbc/certification/>

Appendix 2: Sustainability Bond / Sustainability Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Alphabet Inc.
Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable:	Alphabet Sustainability Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	July 30, 2020
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:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> 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, Clean Energy, Green Buildings, Clean Transportation, Circular Economy and Design, Affordable Housing, Commitment to Racial Equity, Support for Small Businesses & COVID-19 Crisis Response, are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that the eligible categories will lead to positive environmental or social impacts and advance the UN Sustainable Development Goals, specifically SDG 1, 3, 4, 7, 8, 10, 11, 12, and 15.

Use of proceeds categories as per GBP:

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

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

Use of proceeds categories as per SBP:

- | | |
|---|--|
| <input type="checkbox"/> Affordable basic infrastructure | <input type="checkbox"/> Access to essential services |
| <input checked="" type="checkbox"/> Affordable housing | <input checked="" type="checkbox"/> Employment generation (through SME financing and microfinance) |
| <input type="checkbox"/> Food security | <input checked="" type="checkbox"/> Socioeconomic advancement and empowerment |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBP | <input type="checkbox"/> 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):

Alphabet Inc. has formed an internal committee with representatives from different departments for evaluating and selecting projects and the final approval responsibility is entrusted with the Google Sustainability Officer. Sustainalytics considers the project selection process to be a market best 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*):

Alphabet will rely on its internal tracking systems managed by the Finance department and invest net proceeds in liquid securities such as cash, equivalents, and US Government securities pending allocation. 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):

Alphabet Inc. intends to report allocation proceeds on its website on an annual basis until full allocation. The report will include allocations made towards Eligible Projects on a category basis and, where feasible, on a project basis. In addition, Alphabet Inc. is committed to reporting on relevant impact metrics. Sustainalytics views Alphabet Inc.'s allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (please specify): |

Information reported:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Sustainability Bond financed share of total investment |
| <input type="checkbox"/> Other (please specify): | |

Frequency:

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Impact reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (please specify): |

Information reported (expected or ex-post):

- | | |
|---|---|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input type="checkbox"/> Energy Savings |
| <input type="checkbox"/> Decrease in water use | <input checked="" type="checkbox"/> Number of beneficiaries |
| <input checked="" type="checkbox"/> Target populations | <input type="checkbox"/> Other ESG indicators (please specify): Energy Efficiency (eg. PUE) |

Frequency:

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Alphabet Sustainability Bond Framework

Means of Disclosure

- | | | |
|---|---|--|
| <input type="checkbox"/> Information published in financial report | x | Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents | x | Other (please specify): Annual Impact Report |
| <input type="checkbox"/> Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): | | |

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.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit | <input type="checkbox"/> Rating |
| <input type="checkbox"/> 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

Alphabet Sustainability Bond Framework

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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These are based on information made available by the issuer and therefore are not warranted as to their merchantability, completeness, accuracy, up-to-dateness or fitness for a particular purpose. The information and data are provided "as is" and reflect Sustainalytics' opinion at the date of their elaboration and publication. Sustainalytics accepts no liability for damage arising from the use of the information, data or opinions contained herein, in any manner whatsoever, except where explicitly required by law. Any reference to third party names or Third Party Data is for appropriate acknowledgement of their ownership and does not constitute a sponsorship or endorsement by such owner. A list of our third-party data providers and their respective terms of use is available on our website. For more information, visit <http://www.sustainalytics.com/legal-disclaimers>.

The issuer is fully responsible for certifying and ensuring the compliance with its commitments, for their implementation and monitoring.

In case of discrepancies between the English language and translated versions, the English language version shall prevail.

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