



# Second-Party Opinion

## Generate Capital PBC Green Financing Framework

### Evaluation Summary

Sustainalytics is of the opinion that the Generate Capital PBC Green Financing Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021 and the Green Loan Principles 2021. This assessment is based on the following:



**USE OF PROCEEDS** The eligible categories for the use of proceeds – Renewable Energy, Energy Efficiency, Pollution Prevention & Control, Clean Transportation, Sustainable Water and Wastewater Management, Environmentally Sustainable Management of Living Natural Resources & Land Use, and Green Buildings – are aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 6, 7, 9, 11 and 12.



**PROJECT EVALUATION / SELECTION** Generate’s internal process for evaluating and selecting projects involves representatives from the Company’s accounting, finance, legal, operations and investment teams. Environmental and social risks related to all financed projects are managed through the use of required counterparty risk reporting as well as internal tracking of all projects related environmental incidents. Sustainalytics considers the project selection process in line with market practice.



**MANAGEMENT OF PROCEEDS** Generate’s finance team will be responsible for the allocation and tracking of net proceeds to eligible projects. Generate intends to allocate all proceeds within 24 months of issuance, and all unallocated proceeds will be held in cash, cash equivalents or in marketable securities. This is in line with market practice.



**REPORTING** Generate intends to publish a green bond report containing both project allocation and impact data, where feasible, to its website on an annual basis until full allocation. The allocation reporting is expected to include project or category-level details on eligible projects and the balance of unallocated proceeds. Generate’s impact reporting will include relevant quantitative impact metrics as indicated within the Framework. Sustainalytics views Generate’s allocation and impact reporting as aligned with market practice.

<b>Evaluation Date</b>	April 08, 2022
<b>Issuer Location</b>	San Francisco, United States

### Report Sections

Introduction.....	2
Sustainalytics’ Opinion .....	3
Appendices .....	11

**For inquiries, contact the Sustainable Finance Solutions project team:**

- Nadia Djinnit (Toronto)**  
Project Manager  
nadia.djinnit@sustainalytics.com  
(+1) 647 861 0403

---

- Taylor Whitfield (Toronto)**  
Project Support

---

- Titus Vilches (Amsterdam)**  
Project Support

---

- Aakanksha Jain (Toronto)**  
Project Support

---

- Maria-Pilar Salazar (New York)**  
Client Relations  
susfinance.americas@sustainalytics.com  
(+1) 646 518 9623

## Introduction

Generate Capital PBC (“Generate” or the “Company”) is a diversified sustainable infrastructure company that builds, owns, operates and finances sustainable infrastructure for clean energy, mobility, water, waste and agriculture projects. Founded in 2014 and structured as a public benefit corporation (PBC), Generate is based in San Francisco, California, USA. It employed approximately 170 people as of December 31, 2021 and operates over 2,000 sustainable infrastructure assets.

Generate has developed the Generate Capital PBC Green Financing Framework (the “Framework”) under which it intends to issue multiple green bonds and use the proceeds to finance or refinance, in whole or in part, existing or future sustainable infrastructure projects that are expected to contribute to energy efficiency, waste reduction and decarbonization. The Framework defines eligibility criteria in seven areas:

1. Renewable Energy
2. Energy Efficiency
3. Pollution Prevention & Control
4. Clean Transportation
5. Sustainable Water and Wastewater Management
6. Environmentally Sustainable Management of Living Natural Resources & Land Use
7. Green Buildings

A list of eligible projects and projected allocations for Generate’s green bond issuances is provided in Appendix 1.

Generate engaged Sustainalytics to review the Generate Capital PBC Green Financing Framework, dated March 2022, and provide a Second-Party Opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP)<sup>1</sup> and the Green Loan Principles 2021 (GLP).<sup>2</sup> The Framework has been published in a separate document.<sup>3</sup>

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

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent<sup>4</sup> 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 Green Bond Principles 2021, as administered by ICMA, and the Green Loan Principles, as administered by LMA, APLMA and LSTA;<sup>5</sup>
- 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 Generate’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. Generate representatives have confirmed (1) they understand it is the sole responsibility of Generate to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all

<sup>1</sup> The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>.

<sup>2</sup> The Green Loan Principles are administered by the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications & Trading Association and are available at <https://www.lsta.org/content/green-loan-principles/>.

<sup>3</sup> The Generate Capital PBC Green Financing Framework is available on Generate Capital PBC’s website at: [www.generatecapital.com](http://www.generatecapital.com).

<sup>4</sup> 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.

<sup>5</sup> In addition to the Loan Market Association, the GLP is also administered by the Asia Pacific Loan Market Association and the Loan Syndications & Trading Association

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 Generate.

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. Upon twenty-four (24) months following the evaluation date set stated herein, Generate is encouraged to update the Framework, if necessary, and seek an update to the Second-Party Opinion to ensure ongoing alignment of the Framework with market standards and expectations. 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 Generate has made available to Sustainalytics for the purpose of this Second-Party Opinion.

## Sustainalytics' Opinion

### Section 1: Sustainalytics' Opinion on the Generate Capital PBC Green Financing Framework

Sustainalytics is of the opinion that the Generate Capital PBC Green Financing Framework is credible and impactful, and aligns with the four core components of the GBP. Sustainalytics highlights the following elements of Generate's Green Financing Framework:

- Use of Proceeds:
  - The eligible categories – Renewable Energy, Energy Efficiency, Pollution Prevention & Control, Clean Transportation, Sustainable Water and Wastewater Management, Environmentally Sustainable Management of Living Natural Resources & Land Use, and Green Buildings – are aligned with those recognized by the GBP.
  - Generate intends to finance investments, acquisitions, financings, co-investments, joint ventures and loans to fund development of eligible assets under all categories of the Framework. Sustainalytics notes that the Generate has explicitly stated that joint ventures and co-investments will be to take a stake in a green pureplay as outlined in the categories in the Framework. Furthermore, Generate intends to support Green Financing instruments such as convertible bonds, private debt placements and preferred securities. Sustainalytics views the financing instruments as aligned and eligible.
  - Under the Renewable Energy category, Generate intends to finance the design, construction, operation and maintenance of renewable energy production and storage infrastructure from wind, solar and waste-to-energy sources.
    - In addition to direct investment in projects, Generate may also procure renewable energy via long-term power purchase agreements (PPA) and virtual purchase power agreements (VPPA) limited to those with a minimum tenor of five years. Sustainalytics considers the long-term nature of the PPAs and VPPAs as providing greater assurance of positive impacts.
    - Generate's waste-to-energy projects will utilize a variety of waste feedstocks to produce both electricity and renewable natural gas (RNG) via anaerobic digestion. Sustainalytics recognizes that, upon combustion, RNG releases the same pollutants and GHGs as conventional natural gas. However, the emissions potential of the gas is derived from waste matter that would otherwise decompose naturally and be released

- freely into the atmosphere, and therefore, from a life cycle perspective, RNG has a very low or negative carbon intensity.
- Sustainalytics considers the use of waste feedstocks to generate electricity and RNG via anaerobic digestion to be aligned with market practice.
  - Under the Energy Efficiency category Generate may finance projects and technologies designed to enable energy consumption and emissions reductions, such as energy efficient heating, cooling, ventilations, lighting and electrical equipment. Expenditures may also include those related to energy use optimization and demand reduction, such as battery storage for smart grids, smart thermostats, load control systems, sensors and building information systems, and investments into mobile network modernization.
    - Investments related to mobile networks will include improvements to energy efficient digital communication infrastructure and mobile network upgrades (to technologies such as 5G), or the modernization of broadband networks (e.g. fibre optic).
    - While noting the variety of definitions and applications of smart grid technology,<sup>6</sup> Sustainalytics views positively investments that are designed to improve grid efficiency.
    - Generate has indicated that no technologies funded under this category will be fossil fuel powered.
    - Sustainalytics considers these expenditures to be aligned with market expectation.
  - Under the Pollution Prevention & Control category, Generate intends to finance projects aimed at reducing GHG emissions, such as through carbon capture and storage projects, including bioenergy carbon capture and sequestration (BECCS). Expenditures may also include those related to waste reduction and prevention, such as waste-to-energy projects and soil remediation.
    - Generate's waste-to-energy projects will utilize waste feedstock such as post-consumer food waste, packaged food waste, liquid organic waste, fats, oils and greases, source separated organics, and animal waste. Sustainalytics notes that improperly managed agricultural waste in particular can cause significant negative environmental impacts due to excess nutrient runoff entering waterways and leading to eutrophication and soil and water pollution. By reducing waste disposal via conventional means, eligible projects under this category are expected to deliver environmental benefits.
    - Generate has confirmed that financed commercial scale BECCS will projects will: i) have an emissions threshold under 100 gCO<sub>2</sub>e/kWh, 2) utilize only waste feedstock or certified non-waste feedstock,<sup>7</sup> and iii) permanently store all captured carbon. Sustainalytics considers BECCS project adherence to these criteria to be in line with market expectation.
  - Under the Clean Transportation category, Generate may contemplate the financing of manufacturing or development of clean transportation vehicles, including electric vehicles and clean mass transportation, including electric rail and electric buses. Expenditures may also include those related to associated infrastructure necessary for the operation of zero- and low-emissions vehicles, such as charging stations.
    - Vehicles financed under this category will be limited to those with emissions below 50 gCO<sub>2</sub>/km for passenger vehicles, below 50 gCO<sub>2</sub>/pkm for public transportation vehicles, and below 25 gCO<sub>2</sub>/tkm for passenger and freight rail. Sustainalytics considers these emissions thresholds to be aligned with market practice.
  - Under the Sustainable Water and Wastewater Management category, Generate may finance projects aimed at sustainable infrastructure for clean drinking water and wastewater treatment. Sustainalytics considers this to be aligned with market practice.
  - Under the Environmentally Sustainable Management of Living Natural Resources & Land Use category, Generate intends to finance projects that are aimed at enhancing ecosystem protection or restoration, including climate smart agriculture practices such as: no-till farming practices, permaculture, agroforestry, technologies that optimize agricultural resource efficiency, such as GIS systems, biological crop protection or drip irrigation; fertilizers that do not involve the use of synthetic nutrients or pesticides and are produced from waste products

<sup>6</sup> Smart grid technologies and projects may include those aimed at connecting renewable sources, improving efficiency and enabling demand side response such as smart meters, IT systems supporting network control, sensors, measurement tools, communication and control.

<sup>7</sup> Eligible non-waste feedstock certifications are limited to: Roundtable on Sustainable Biomaterials, International Sustainability and Carbon Certification, Roundtable on Responsible Soy, EU Organic, Rainforest Alliance, Forest Stewardship Council, Programme for the Endorsement of Forest Certification, Roundtable on Sustainable Palm Oil (eligible for palm oil waste feedstocks only), and the Sustainable Biomass Program.

such as food waste, animal manure, industrial plant organic waste and municipal water treatment plant organics; natural carbon sinks such as through reforestation conservation projects and regenerative grazing; and projects that improve resiliency in food systems, such as aquaculture and agrivoltaics, and controlled environment agriculture practices that include vertical farms, hydroponics and aeroponics.

- Sustainalytics notes that climate smart agricultural projects will be tied to projects with carbon sequestration certified by at least one of American Carbon Registry, Verra, Climate Action Reserve or Gold Standard. Sustainalytics also encourages Generate to promote the holistic deployment of climate smart agriculture practices, as well as to report on the environmental benefits of the financed projects.
  - Sustainalytics notes that technologies intended to optimize agricultural resource efficiency, such as GIS systems, are employed in a wide variety of types of farms, some of which may use unsustainable methods. The Issuer has confirmed that it does not intend to finance such activities under the Framework. Sustainalytics nonetheless encourages Generate to report on the impact of its financed activities on a continual basis.
  - Generate has confirmed that financing for regenerative grazing practices will be limited to integrated agricultural operations only, and that industrial-scale livestock farming is excluded.
  - Aquaculture projects will be limited to those certified by the Aquaculture Stewardship Council, Global G.A.P for Aquaculture, Best Aquaculture Practices (2 stars or more), and Monterey Bay Aquarium Seafood Watch (Best Choice - Green).
  - Agrivoltaics involves the integration of PV solar panel systems and crop production. Generate has confirmed that bond proceeds used to finance such operations will not go towards the purchasing of land, nor livestock raising for meat or dairy production.
  - Hydroponics and aeroponics projects will have a minimum of 50% renewable energy usage.
- Under the Green Buildings category, Generate intends to finance expenditures related to new or existing commercial or residential buildings that have received or are expected to receive third-party sustainable certifications, namely, LEED<sup>8</sup> (Gold or above), BREEAM<sup>9</sup> (Excellent or above) and ENERGY STAR<sup>10</sup> (85 or greater). Generate also intends to finance projects and activities that contribute to and enable green cities and communities, such as investments into energy efficient digital communication infrastructure. Sustainalytics views these expenditures and the selected certification schemes and levels as credible and considers buildings meeting such standards to provide a positive impact.
- Project Evaluation and Selection:
    - Representatives from Generate's accounting, finance, legal, operations and investment teams will evaluate and select eligible projects under the Framework, and assess annually their performance in compliance with the Framework's criteria.
    - Generate identifies, evaluates and manages environmental and social risks associated with eligible projects financed under the Framework through various internal mechanisms. These include mandatory project risk assessments and reports from all counterparties on all projects. Sustainalytics considers this process to be adequate. Please refer to section 2 for additional details.
    - Based on this selection process with cross-divisional participation, and the adequate processes in place for environmental and social risk mitigation, Sustainalytics considers Generate's project selection process to be in line with market practice.
  - Management of Proceeds:
    - Generate's finance team will be responsible for the allocation and tracking of net proceeds to eligible projects throughout the bond tenor.
    - Generate will track allocations using an internal tracking system. Pending allocation, Generate will hold an amount equal to the net proceeds in accordance with its internal investment policy,

<sup>8</sup> LEED, LEED Rating System: <https://www.usgbc.org/leed>

<sup>9</sup> BREEAM, Scoring and Rating BREEAM assessed buildings:

[https://www.breeam.com/BREEAM2011SchemeDocument/Content/03\\_ScoringRating/scoring.htm](https://www.breeam.com/BREEAM2011SchemeDocument/Content/03_ScoringRating/scoring.htm)

<sup>10</sup> Energy Star, Energy Star Certification for Buildings: [https://www.energystar.gov/buildings/building\\_recognition/building\\_certification](https://www.energystar.gov/buildings/building_recognition/building_certification)

- temporarily in cash, cash equivalents or marketable securities. This is considered to be aligned with market practice.
- Generate has committed to allocate all net proceeds to eligible activities under the Framework within 24 months of issuance. This is in line with market practice.
  - Based on the practices in place for proceeds allocation and tracking, as well as the specified temporary use of proceeds, Sustainalytics considers this process to be in place with market practice.
  - Reporting:
    - Generate commits to report annually, until full allocation of the net proceeds and on a timely basis in the case of material developments, a green bond report to its website. The green bond report is expected to include project or category-level details on the allocation of net proceeds, as well as the balance of unallocated proceeds.
    - Impact reporting will also be included in the green bond report, and will speak to performance against key metrics, such as: i) renewable energy produced (MWh), ii) avoided emissions (MtCO<sub>2</sub>e), iii) total waste diverted from landfill (Mt), iv) number of electric vehicles produced or financed, v) environmentally sensitive areas protected (acres), and vi) total number of green buildings receiving a certification.
    - Based on the commitment to allocation and impact reporting, Sustainalytics considers this process to be in line with market practice.

#### **Alignment with Green Bond Principles 2021 and Green Loan Principles 2021**

Sustainalytics has determined that the Generate Capital PBC Green Financing Framework aligns with the four core components of the GBP and GLP. For detailed information, please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

## **Section 2: Sustainability Strategy of Generate**

#### **Contribution of framework to Generate Capital PBC's sustainability mandate**

Sustainalytics is of the opinion that Generate demonstrates a commitment to sustainability by facilitating investments that support the transition towards a low-carbon economy through renewable energy, resource efficiency and sustainable infrastructure development. The Company prioritizes a "triple bottom line" business model, which ingrains environmental and social impact considerations into its operations, and is thus aligned with its mission as a public benefit corporation (PBC). PBCs are corporate bodies which pursue both economic and social objectives for the benefit of all stakeholders, including employees, customers, communities and the environment, and this designation is central to Generate's objectives, operations and activities.<sup>11</sup>

In this context, Sustainalytics highlights the following elements of Generate's sustainability-focused investment practices as being aligned with the Framework:

- Generate operates an "infrastructure as a service" financing model that provides low-carbon infrastructure solutions that adhere to what the Company labels "the 4 Ds" of infrastructure transition, namely resource infrastructure that is: (i) decarbonized, (ii) decentralized, (iii) democratized, (iv) and digitized.<sup>12</sup> Using this model, Generate has built a portfolio of more than USD 3 billion worth of sustainable infrastructure assets across a range of market segments and technologies including battery storage, community solar, energy efficiency, biogas and waste-to-electricity facilities, composting infrastructure, electric buses and hydrogen-electric vehicle fleets.
- When evaluating sustainable infrastructure opportunities in these sectors, Generate incorporates ESG factors into its investment decision-making processes, and balancing all stakeholder interests with the public benefit, as part of its fiduciary duty as a PBC.<sup>13</sup>

Sustainalytics is of the opinion that the Generate Capital Green Financing Framework is aligned with the Company's sustainability mandate and will further the Company's action on the development of its portfolio of sustainable infrastructure investments. Generate has also disclosed to Sustainalytics that it is currently in

<sup>11</sup> The National Law Review, "Public Benefit Corporations are Going Public", (2021), at: <https://www.natlawreview.com/article/public-benefit-corporations-are-going-public>

<sup>12</sup> Fehrenbacher, K. (2014), "Meet Generate Capital, a new way to fund energy projects", at: <https://gigaom.com/2014/12/04/these-investors-are-using-the-solar-as-a-service-model-for-resources/>

<sup>13</sup> Shared with Sustainalytics in confidentiality

the process of updating its formal ESG guiding principles to include specific and comprehensive GHG emission targets for its investing activities. While noting that Generate completed its transition into a PBC only in November 2021, Sustainalytics encourages Generate Capital to disclose these goals and publicly report on its progress towards achieving them.

### **Approach to managing environmental and social risks associated with the projects**

Sustainalytics recognizes that the net proceeds from the bonds issued under the Framework will be directed towards eligible projects that are expected to have positive environmental impact. However, 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 occupational health and safety, community relations and stakeholder participation, land use and biodiversity issues associated with large-scale infrastructure development, and waste generated in construction.

Sustainalytics is of the opinion that Generate is able to manage and mitigate potential risks through implementation of the following:<sup>14</sup>

- The Company incorporates ESG screening into its investment decision making process by identifying material ESG risks associated with its investments based on SASB standards, as well as measures to mitigate these risks. Relevant third-party advisors are also appointed during the investment due diligence process to help identify investment risks.
- Counterparties which act as asset managers to Generate Capital are required to report on environmental and safety issues relating to assets they manage.
- To manage investment portfolio risks on an ongoing basis, Generate maintains a portfolio risk register that determines the impact of various risks to its investments, including ESG risks such as climate and environmental contamination risks. Additionally, active portfolio management and underwriting processes supplement the risk register as a portfolio risk management tool.
- Regarding health and safety, the Company has developed a worker health and safety plan consistent with occupational safety and health administration (OSHA) standards for implementation across projects the Company owns and operates.
- Generate has established a code of conduct for employees and stakeholders that helps ensure ethics and responsibility in its activities.
- The Company has confirmed that it works alongside its partners to ensure stakeholders are informed on all projects, and that opportunities for collaboration and engagement are pursued.

Sustainalytics is of the opinion that Generate has implemented adequate policies, standards and assessments to manage and mitigate environmental and social risks commonly associated with the eligible categories, Generate is encouraged to publicly disclose these measures to ensure transparency.

## **Section 3: Impact of Use of Proceeds**

All seven use of proceeds categories are aligned with those recognized by the GBP. Sustainalytics has focused on three below where the impact is specifically relevant in the local context.

### **Importance of expanding energy efficiency technologies and development of renewables in the US**

#### *Renewable Energy*

The US is the second-largest electricity consumer in the world, accounting for 16.8% of global electricity consumption in 2021.<sup>15</sup> The electricity sector is the second-largest source of GHG emissions in the US, accounting for 25% of total American GHG emissions in 2019, with fossil fuels comprising the majority of this generation,<sup>16,17</sup> showing that there is significant room for improvement to the share of energy generation from renewable sources. Indeed, the US Energy Information Administration estimates that renewable energy

<sup>14</sup> Generate Capital, "ESG Documentation", shared in confidentiality

<sup>15</sup> International Energy Agency, "IEA Atlas of Energy", at: <http://energyatlas.iea.org/#/tellmap/-1118783123/1>

<sup>16</sup> US Environmental Protection Agency, "Sources of Greenhouse Gas Emissions", at: <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#electricity>

<sup>17</sup> US Energy Information Administration, "Electricity Explained", at: <https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php>

sources in the US electricity generation mix will rise from 21% to 42% in 2050.<sup>18</sup> Contributing to this increase in renewable energy generation is the growing sector of biogas, which counted more than 2,200 sites producing biogas across all 50 states as of 2018. New biogas systems can displace the emissions equivalent of 117 million passenger vehicles from the road and generate 103 TWh of electricity each year.<sup>19</sup> In April 2021, the US federal government set a goal to reach 100% carbon-free electricity by 2035,<sup>20</sup> which is expected to further add to the renewable energy momentum in the country.

In addition, biogas projects can also be used to produce renewable natural gas (RNG) has the potential to reduce tailpipe GHG emissions from vehicles by up to 75% compared to traditional fuel sources such as gasoline or diesel.<sup>21</sup>

### *Energy Efficiency*

On the energy demand side, residential and commercial buildings accounted for nearly 29% of US end-use energy consumption and 40% of total US energy consumption in 2021,<sup>22</sup> with heating and cooling in the residential sector being the largest specific end-use for electricity in the country.<sup>23</sup> Among the top-25 energy-consuming countries in the world, the US ranked 10<sup>th</sup> for policies and performance on energy efficiency in a 2018 report of the American Council for an Energy Efficient Economy (ACEEE),<sup>24</sup> suggesting that there is ample opportunity for the US to implement stronger policies on energy efficiency and consumption. Increasing end-use energy efficiency can also play an important role in reducing emissions from electricity generation. For example, despite considerable population and economic growth in the US since 2010, electricity demand in the country has been largely flat over the last 10 years as a result of energy efficiency measures.<sup>25,26</sup> The Energy Star programme alone is credited with avoiding 330 Mt of GHG emissions, saving USD 35 billion in energy costs and 430 GWh in electricity in 2018 alone.<sup>27</sup>

In this context, Sustainalytics is of the opinion that Generate's investment in energy-efficient technologies and renewable energy development under the Framework can be expected to deliver positive environmental impacts.

### **Importance of waste diversion from landfills in the US**

In 2018, the US accounted for roughly 4% of the global population but generated 12% of global municipal solid waste (MSW).<sup>28</sup> MSW landfills are the third-largest source of human-related methane emissions in the US, and in 2019 contributed around 15.1% of these emissions. As a source of annual GHG emissions, landfills are equivalent to over 21.6 million vehicles, or the energy use from 12 million homes.<sup>29</sup> In 2018, 292.4 million US short tons (or 4.9 lbs per person per day) of MSW were generated in the US, of which 146.1 million US short tons (50%) were landfilled, with food being the largest portion of this at approximately 24%.<sup>30</sup> Food is a major contributor in the municipal solid waste stream as 30% to 40% of the food supply in the US is not consumed,

<sup>18</sup> US Energy Information Administration, "EIA projects renewables share of U.S. electricity generation mix will double by 2050", (2021), at: [www.eia.gov/todayinenergy/detail.php?id=46676](http://www.eia.gov/todayinenergy/detail.php?id=46676)

<sup>19</sup> American Biogas Council, "Biogas Market Snapshot", (2018), at: <https://americanbiogascouncil.org/biogas-market-snapshot/>

<sup>20</sup> The White House, "FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies", (2021), at: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>

<sup>21</sup> US Environmental Protection Agency, "An Overview of Renewable Natural Gas from Biogas", (2020), at: [www.epa.gov/sites/default/files/2020-07/documents/lmop\\_rng\\_document.pdf](http://www.epa.gov/sites/default/files/2020-07/documents/lmop_rng_document.pdf)

<sup>22</sup> US Energy Information Administration, "How much energy is consumed in U.S. residential and commercial buildings?", at: <https://www.eia.gov/tools/faqs/faq.php?id=86&t=1>

<sup>23</sup> US Energy Information Administration, "Electricity explained", (2021), at: [www.eia.gov/energyexplained/electricity/use-of-electricity.php](http://www.eia.gov/energyexplained/electricity/use-of-electricity.php)

<sup>24</sup> ACEEE, "The 2018 International Energy Efficiency Scorecard", (2018), at: <https://aceee.org/sites/default/files/publications/researchreports/i1801.pdf>

<sup>25</sup> US Census Bureau, "Last Census Population Estimates of the Decade Preview 2020 Census Count", (2020), at:

<https://www.census.gov/library/stories/2020/04/nations-population-growth-slowed-this-decade.html>

<sup>26</sup> Goldman, C. & Schwartz, L. (2019), "What Does the Future Hold for Utility Electricity Efficiency Programs?", Greentech Media, at:

<https://www.greentechmedia.com/articles/read/what-does-the-future-hold-for-utility-electricity-efficiency-programs>

<sup>27</sup> Energy Star, "Energy Star by the Numbers – 2019", (2020), at:

[https://www.energystar.gov/sites/default/files/asset/document/2020\\_EPA\\_ES\\_Factsheet\\_ByTheNumbers\\_v4\\_KAB508c.pdf](https://www.energystar.gov/sites/default/files/asset/document/2020_EPA_ES_Factsheet_ByTheNumbers_v4_KAB508c.pdf)

<sup>28</sup> Statista, "Municipal Solid Waste in the U.S. - statistics & facts", (2021), at: <https://www.statista.com/topics/2707/municipal-solid-waste-in-the-united-states/#dossierKeyfigures>

<sup>29</sup> US Environmental Protection Agency, "Basic Information about Landfill Gas", at: <https://www.epa.gov/lmop/basic-information-about-landfill-gas>

<sup>30</sup> US Environmental Protection Agency, "National Overview: Facts and Figures on Materials, Wastes and Recycling", at: <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>

resulting in negative impacts from the waste and methane emissions, and being indicative of inefficient resource use.<sup>31</sup>

To reduce these impacts, the US federal government has spent considerable effort recent decades to address methane emissions in the agricultural sector. For example, the US Department of Agriculture (USDA), the EPA and the US Food and Drug Administration are working together to meet a goal of reducing food loss and waste by 50% by 2030.<sup>32</sup> In addition, USDA's Rural Business Cooperative Service has provided USD 117 million in loans and grants to support methane-reducing anaerobic digester projects over the last 10 years, having recently set a goal of increasing this figure to USD 240 million. Similarly, the USDA introduced a USD 10 million Environmental Quality Incentives Program that targets anaerobic digesters and select rice cultivation practices to reduce methane emissions.<sup>33</sup>

Further, proposed amendments to the Clean Air Act aim to reduce 41 million US short tons of methane emissions between 2023 and 2035, which is the equivalent of 920 Mt of CO<sub>2</sub>.<sup>34</sup> In 2022, the EPA also unveiled the selection of 11 organizations anticipated to receive USD 2 million to support the diversion of food waste from landfills by expanding anaerobic digester capacity across the US.<sup>35</sup>

In this context, Sustainalytics is of the opinion that the investments in waste reduction and activities and assets financed by Generate under the Framework will positively contribute to the achievement of GHG emission reduction goals.

#### Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by the year 2030. The bonds issued under the Generate Capital PBC Green Financing Framework are expected to advance the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Energy Efficiency	7. Affordable and clean energy	7.3 By 2030, double the global rate of improvement in energy efficiency
	9. Industry, innovation and infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Pollution Prevention & Control	11. Sustainable cities and communities	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
	12. Responsible consumption and production	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to

<sup>31</sup> US Environmental Protection Agency, "United States 2030 Food Loss and Waste Reduction Goal", at: <https://www.epa.gov/sustainable-management-food/united-states-2030-food-loss-and-waste-reduction-goal>

<sup>32</sup> The White House Office of Domestic Climate Policy, "U.S Methane Emissions Reduction Plan", (2021), at: <https://www.whitehouse.gov/wp-content/uploads/2021/11/US-Methane-Emissions-Reduction-Action-Plan-1.pdf>

<sup>33</sup> Ibid.

<sup>34</sup> US Environmental Protection Agency, "U.S. to Sharply Cut Methane Pollution that Threatens the Climate and Public Health", (2021), at: <https://www.epa.gov/newsreleases/us-sharply-cut-methane-pollution-threatens-climate-and-public-health>

<sup>35</sup> US Environmental Protection Agency, "EPA Announces Selection of 11 Organizations to Receive \$2 Million to Help Tackle the Climate Crisis Through Food Diversion", (2022), at: <https://www.epa.gov/newsreleases/epa-announces-selection-11-organizations-receive-2-million-help-tackle-climate-crisis>

		<p>minimize their adverse impacts on human health and the environment</p> <p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p>
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
Sustainable Water and Wastewater Management	6. Clean Water and Sanitation	<p>6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all</p> <p>6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</p>
Environmentally Sustainable Management of Living Natural Resources and Land Use	12. Responsible consumption and production	12.2 By 2030, achieve the sustainable management and efficient use of natural resources
Green Buildings	9. Industry, innovation and infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

## Conclusion

Generate has developed the Generate Capital PBC Green Financing Framework under which it intends to issue green bonds and use the proceeds to finance or refinance new or existing projects aimed generally at improving environmental performance while supporting Generate's ESG priorities. The Framework defines eligibility criteria in seven areas: (i) Renewable Energy, (ii) Energy Efficiency, (iii) Pollution Prevention and Control, (iv) Clean Transportation, (v) Sustainable Water and Wastewater Management, (vi) Environmentally Sustainable Management of Living Natural Resources and Land Use, and (vii) Green Buildings. Sustainalytics considers the use of proceeds to be impactful and highlights that Generate uses credible third-party certification schemes for its green building criteria.

Generate's processes for project selection and evaluation, project management and reporting are aligned with market practice. Based on the above Sustainalytics considers the Generate Green Financing Framework to be credible, robust and impactful, and aligned with the GBP and GLP.

## Appendices

### Appendix 1: Green Bond / Green Bond Programme - External Review Form

#### Section 1. Basic Information

<b>Issuer name:</b>	Generate Capital PBC
<b>Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:</b>	Generate Capital PBC Green Financing Framework
<b>Review provider's name:</b>	Sustainalytics
<b>Completion date of this form:</b>	April 08, 2022
<b>Publication date of review publication:</b>	

#### 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:

- |  |  |
|--|--|
| <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 <sup>nd</sup> 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 – Renewable Energy, Energy Efficiency, Pollution Prevention & Control, Clean Transportation, Sustainable Water and Wastewater Management, Environmentally Sustainable Management of Living Natural Resources & Land Use, and Green Buildings – are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 6, 7, 9, 11 and 12.

### 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 checked="" type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation  | <input checked="" type="checkbox"/> Clean transportation  |
| <input checked="" type="checkbox"/> Sustainable water and wastewater management   | <input type="checkbox"/> Climate change adaptation  |
| <input 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 GBP | <input type="checkbox"/> Other (please specify):  |

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

## 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Generate Capital PBC's internal process for evaluating and selecting projects involves representatives from the Company's accounting, finance, legal, operations and investment teams. Environmental and social risks related to all financed projects are managed through the use of required counterparty risk reporting as well as internal tracking of all project related environmental incidents. Sustainalytics considers the project selection process in line with market practice.

### Evaluation and selection

- |  |   |
|--|---|
| <input type="checkbox"/> Credentials on the issuer's environmental sustainability objectives                       | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories               |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> 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*):

Generate's finance team will be responsible for the allocation and tracking of net proceeds to eligible projects. Generate intends to allocate all proceeds within 24 months of issuance, and all unallocated proceeds will be held in cash, cash equivalents or in marketable securities. This is in line with market practice.

#### Tracking of proceeds:

- Green 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*):

Generate intends to publish a green bond report containing both project allocation and impact data to its website on an annual basis until full allocation. The allocation reporting is expected to include project or category-level details on eligible projects and the balance of unallocated proceeds. Generate's impact reporting will include relevant quantitative impact metrics as indicated within the Framework. Sustainalytics views Generate's allocation and impact reporting as aligned with market practice.

**Use of proceeds reporting:**

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

**Information reported:**

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

**Frequency:**

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

**Impact reporting:**

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

**Information reported (expected or ex-post):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input checked="" type="checkbox"/> Energy Savings                       |
| <input checked="" type="checkbox"/> Decrease in water use   | <input type="checkbox"/> Other ESG indicators ( <i>please specify</i> ): |

**Frequency**

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

**Means of Disclosure**

- |   |   |
|---|---|
| <input type="checkbox"/> Information published in financial report  | <input type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents  | <input type="checkbox"/> Other ( <i>please specify</i> ):               |
| <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 <sup>nd</sup> opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit                        | <input type="checkbox"/> Rating        |
| <input type="checkbox"/> Other ( <i>please specify</i> ):            |  |

**Review provider(s):****Date of publication:****ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP**

- i. **Second-Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Green 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 Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental 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 environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally 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 Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green 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 Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green 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 performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

## Disclaimer

**Copyright ©2022 Sustainalytics. All rights reserved.**

The information, methodologies and opinions contained or reflected herein are proprietary of Sustainalytics and/or its third party suppliers (Third Party Data), and may be made available to third parties only in the form and format disclosed by Sustainalytics, or provided that appropriate citation and acknowledgement is ensured. They are provided for informational purposes only and (1) do not constitute an endorsement of any product or project; (2) do not constitute investment advice, financial advice or a prospectus; (3) cannot be interpreted as an offer or indication to buy or sell securities, to select a project or make any kind of business transactions; (4) do not represent an assessment of the issuer's economic performance, financial obligations nor of its creditworthiness; and/or (5) have not and cannot be incorporated into any offering disclosure.

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.

## About Sustainalytics, a Morningstar Company

Sustainalytics, a Morningstar Company, is a leading ESG research, ratings and data firm that supports investors around the world with the development and implementation of responsible investment strategies. The firm works with hundreds of the world’s leading asset managers and pension funds who incorporate ESG and corporate governance information and assessments into their investment processes. The world’s foremost issuers, from multinational corporations to financial institutions to governments, also rely on Sustainalytics for credible second-party opinions on green, social and sustainable bond frameworks. In 2021, Climate Bonds Initiative named Sustainalytics the “Largest Approved Verifier for Certified Climate Bonds” for the fourth consecutive year. The firm was also recognized by Environmental Finance as the “Largest External Reviewer” in 2021 for the third consecutive year. For more information, visit [www.sustainalytics.com](http://www.sustainalytics.com).

