

# Second-Party Opinion

## NTT Group Green Finance Framework



### Evaluation Summary

Sustainalytics is of the opinion that the NTT Group Green Finance 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, 1) Energy Efficiency, 2) Green Buildings, and 3) Renewable Energy, are aligned with those recognized by the Green Bond Principles 2021 and the Green Loan Principles 2021. Sustainalytics considers that NTT Group's eligible projects will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7 and 9.



**PROJECT EVALUATION / SELECTION** NTT Group's affiliated companies will respectively evaluate and select eligible projects based on the eligible criteria, and the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will select projects based on the NTT Group Global Sustainability Charter, in consultation with Nippon Telegraph and Telephone Corporation. The Director in charge of the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will make the final decision. NTT Group has established a process for reducing environmental and social risks, and applies it to all allocation decisions made under the Framework. Sustainalytics views this risk management process as adequate. NTT Group's process to evaluate and select projects is aligned with market practice.



**MANAGEMENT OF PROCEEDS** The proceeds will be managed by NTT Finance Corporation. The Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will track and manage the allocated and unallocated amounts of the proceeds using an internal management system. For unallocated proceeds, the equivalent amount of proceeds is to be managed as cash or cash equivalent. The Group's proceeds management process is aligned with market practice.



**REPORTING** NTT Group is committed to reporting on the allocation and positive environmental impacts annually. The report will include an overview of allocated projects, the amount allocated and unallocated, as well as quantitative and qualitative environmental performance indicators. NTT Group's reporting is aligned with market practice.

**Evaluation date** June 17, 2022<sup>1</sup>

**Issuer Location** Tokyo, Japan

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### Alignment with Japan's Green Bond Guidelines 2020 and Expected Elements of Green Loans under the Green Loans and Sustainability Linked Loan Guidelines 2020

Sustainalytics is of the opinion that the NTT Group Green Finance Framework is in line with Japan's Green Bond Guidelines 2020 as well as Expected Elements of the green loans section under the Green Loan and Sustainability Linked Loan Guidelines 2020, (elements described with the word "should") developed by the Ministry of the Environment of Japan.

<sup>1</sup> This document is an update of the second-party opinion for the NTT Group Green Bond Framework published in September 30, 2021.

## Introduction

NTT Group (NTT Group and its affiliated companies, hereinafter, “NTT Group” or the “Group”) consists of Nippon Telegraph and Telephone Corporation (hereinafter, “NTT”), which was established based on the Act on Nippon Telegraph and Telephone Corporation, etc. (the NTT Act) in 1985, and its affiliated companies. As a holding company of NTT Group, NTT executes management strategies, and promotes research and development for the entire group, and the affiliated companies mainly operate integrated ICT, regional communications, global solutions businesses, etc. Major NTT subsidiaries include NTT DOCOMO, INC., Nippon Telegraph and Telephone East Corporation, Nippon Telegraph and Telephone West Corporation, NTT Ltd., NTT Communications Corporation, NTT DATA CORPORATION, etc. The head office of NTT is located in Tokyo.

NTT Group has developed the NTT Group Green Finance Framework (the “Framework”) in June 2022. Under the Framework, NTT Group intends to issue green bonds and/or execute green loans and use the proceeds to finance and/or refinance, projects that generate environmental benefits. The Framework defines eligibility criteria in the following areas:

1. Energy Efficiency
  - a. 5G networks
  - b. FTTH (Fiber to the Home)
  - c. Research and development for the realization of IOWN (Innovative Optical and Wireless Network) concept
  - d. Data centers
2. Green Buildings
3. Renewable Energy
  - a. Wind power generation
  - b. Solar photovoltaic generation
  - c. Geothermal power generation
  - d. Biomass power generation
  - e. Hydroelectric power generation

NTT Group engaged Sustainalytics to review the Framework, dated June 2022, and provide a second-party opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP)<sup>2</sup> and the Green Loan Principles 2021 (GLP)<sup>3</sup>, Japan’s Green Bond Guidelines 2020<sup>4</sup>, as well as expected elements of green loans under the Green Loan and Sustainability Linked Loan Guidelines 2020.<sup>5</sup> This Framework has been published in a separate document.<sup>6</sup>

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

Sustainalytics’ Second-Party Opinion reflects Sustainalytics independent<sup>7</sup> 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 GBP, as administered by ICMA, GLP as administered by LMA, and Japan’s Green Bond Guidelines 2020 as well as expected elements of green loans under the Green Loan and Sustainability Linked Loan Guidelines 2020;
- The credibility and anticipated positive impacts of the use of proceeds;

<sup>2</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>3</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>4</sup> Ministry of the Environment, Japan, “Green Bond Guidelines, 2020”, at: [http://www.env.go.jp/policy/guidelines\\_set\\_version\\_with%20cover.pdf](http://www.env.go.jp/policy/guidelines_set_version_with%20cover.pdf)

<sup>5</sup> Ministry of the Environment, Japan, “Green Loan and Sustainability Linked Loan Guidelines 2020”, at:

[http://www.env.go.jp/policy/guidelines\\_set\\_version\\_with%20cover.pdf](http://www.env.go.jp/policy/guidelines_set_version_with%20cover.pdf)

<sup>6</sup> The NTT Group Green Bond Framework is available on NTT Group’s website at: <https://www.ntt-finance.co.jp/ir/greenbond/>

<sup>7</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.

- 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 1.11.3, 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 NTT's Finance Department 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. NTT Group representatives have confirmed (1) they understand it is the sole responsibility of NTT Group 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.

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 NTT Group.

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 and loan 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, NTT Group 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 and loan 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 NTT Group has made available to Sustainalytics for the purpose of this SPO.

## Sustainalytics' Opinion

### Section 1: Sustainalytics' Opinion on the NTT Group Green Finance Framework

Sustainalytics is of the opinion that the Framework is credible and impactful, and aligns with the four core components of the GBP and GLP. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
  - The eligible categories for the use of proceeds — 1) Energy efficiency, 2) Green buildings and 3) Renewable energy — are recognized by the GBP and GLP as project categories with clear environmental impact. NTT Group has set targets for the reduction of greenhouse effect gases (GHG) emission from its own business activities and society as a whole, and the use of proceeds will further promote the Group's goal of reducing the environmental impact of the Company and society. Please see Section 3 for Sustainalytics' assessment on impact of the use of proceeds.
  - In the Framework, NTT Group has set a look-back period of up to three years for refinancing operating expenses (OPEX). Sustainalytics considers that this is in line with market practice.
  - In the energy efficiency category, NTT Group intends to invest in projects for 5G networks, FTTH (Fiber to the Home), research and development for the realization of IOWN concept, and data centers that improve electricity consumption efficiency. Sustainalytics positively views the Group's use of proceeds, considering the following elements:
    - Sustainalytics recognizes that the expansion of 5G and fiber-optic networks will potentially increase the overall electricity demand, while positively viewing the contribution of those technologies to improving energy efficiency. Sustainalytics positively views that NTT Group intends to allocate proceeds to 5G-related projects

that are primarily aimed at reducing power consumption and CO<sub>2</sub> emissions, including the introduction of 5G base stations that are expected to save power compared to 3G and 4G, and the introduction of base stations with automatic sleep mode that will contribute to reducing power consumption during low-traffic periods. In addition, in the FTTH business, NTT Group plans to allocate the proceeds to investments in the installation, and operation of optical fiber network (FTTH). The Group has committed to Sustainalytics that it will exclude investments related to the migration from Public Switched Telephone Network (PSTN) to metal IP in the allocation of the proceeds, and will limit the allocation to the investments related to the migration from metal IP lines to FTTH networks as well as new installation of FTTH.

- Regarding data centers, NTT Group intends to allocate the proceeds for construction, refurbishment, acquisition and operation of data centers with high energy efficiency. In the Framework, the Group defined the eligibility criteria of the projects to be below 1.5 Power Usage Effectiveness (PUE),<sup>8</sup> the ratio of total power used by a data center to the power used by ICT equipment. Sustainalytics considers the threshold to be aligned with market practice as a standard that assures a certain level of energy efficiency of data centers.
- NTT Group intends to allocate the proceeds to the proceeds to R&D on the next-generation communications infrastructure IOWN,<sup>9</sup> which may significantly improve electricity efficiency with a network utilizing photonics technology that aims to increase power efficiency by 100 times and an information processing infrastructure that achieves low power consumption by utilizing photonics technology. While Sustainalytics recognizes the potential positive impact of R&D that have reasonable assurance of implementation in the near-term, Sustainalytics notes that it is market expectation to limit the accumulative allocation on such R&D to 10% of the total amount of proceeds. Sustainalytics also notes that NTT Group intend to allocate up to 20% of the total amount of proceeds raised by its green bonds and/or green loans to R&D. As such, Sustainalytics encourages the Group to report on the impact achieved by these R&D activities.
- The Framework defines the category of green buildings, and NTT Group intends to allocate the proceeds to investments and expenditures for construction, refurbishment and acquisition of green buildings that have received or will receive a green building certification from credible third parties, as well as for its relevant investments. For the selection of use of proceeds, the Group will use green building certification programs from credible third parties, which are Platinum, Gold or Silver of LEED-BD+C and LEED-O+M, S, A or B+ of CASBEE buildings (for New building, Existing building, and Renovation) and CASBEE real estate, three stars or above of BELS and three stars or above of DBJ Green Building. While Sustainalytics considers that buildings that achieved any of the top three levels of these certification programs have environmental positive impacts, it also is aware that the market practice is to limit allocation of the proceeds to buildings that have received any of the top two levels of the certification schemes. (Please refer to Appendix 2 for an overview and comparison of the green building certification scheme.) In addition to the eligibility criteria above, the Framework has defined the eligibility criteria for buildings that receives B+ rank or above for the local government-version CASBEE<sup>10</sup> and AAA for the Tokyo Building Environment Plan<sup>11</sup> (both the power-saving property of the facility system and the thermal insulation property of building). Since these programs are based on self-evaluation, which may weaken the strictness and credibility of the environmental positive impact, Sustainalytics encourages the Group to allocate the proceeds in the buildings that obtains a green building certification assessed by a third party to further strengthen the Framework.

<sup>8</sup> PUE = (Total Facility Power) / (IT Equipment Power). A PUE closer to 1.0 is considered to have better energy efficiency.

<sup>9</sup> NTT Group, "R&D IOWN", at: <https://www.rd.ntt/e/iown/>

<sup>10</sup> Information on the CASBEE evaluation by the local governments of 24 cities is available at [http://www.ibec.or.jp/CASBEE/local\\_cas.htm](http://www.ibec.or.jp/CASBEE/local_cas.htm)

<sup>11</sup> For newly built, added to, and modified buildings whose total floor space exceeds 2,000 m<sup>2</sup>, the Tokyo Building Environment Plan System demands the submission of a self-evaluation of the environmental measures (rationalization of energy use, the appropriate use of resources, conservation of the natural environment, and mitigation of heat island phenomena) to the Tokyo Metropolitan Government. At the time of the transfer of selling/leasing/trust beneficiary rights of newly built and extended buildings whose total floor space exceeds 10,000 m<sup>2</sup>, a transferor is required to provide the assessment results of energy-saving properties to a transferee. In addition to the status of the adoption of energy-efficient facilities, etc., the assessment results of energy-efficiency properties have a section to evaluate the thermal insulation property of a building and power-saving property of a facility system. This uses the five-grade evaluation set by the Tokyo Metropolitan Government (AAA being the best and C being the worst). <https://www7.kankyo.metro.tokyo.lg.jp/building/eva/outline.html#no5>

- The Group intends to allocate the proceeds to the expenditures related to the construction, refurbishments and operation of renewable energy (solar, wind, geothermal, biomass, and hydroelectric power generation). The Framework defines the thresholds for the use of proceeds by power source. Sustainalytics views that the thresholds set for each power source by the Group mitigate environmental and social risks, and are aligned with market practice:
    - The emission volume of GHG of a geothermal facility is 100 gCO<sub>2</sub>/KWh or less
    - The biomass raw material to be used for biomass power generation is waste-derived which excludes non-certified palm oils
    - Hydroelectric power projects are limited to run-of-river without artificial reservoir or low storage capacity
- Project Evaluation and Selection:
  - NTT Group's evaluation and selection of the projects will be conducted by NTT Group's affiliated companies which operate those eligible projects, the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters, and NTT. Those affiliated companies will evaluate and select the projects based on the eligibility criteria. Then the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will select the projects based on the Group's basic guidelines "NTT Group Global Sustainability Charter," in consultation with NTT. The director in charge of the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will make the final decision. Sustainalytics considers the Group's project evaluation and selection process to be aligned with market practice.
  - Toward reducing environmental and social risks associated with eligible projects, NTT Group has specified in the Framework matters that should be ensured, including complying with applicable environmental laws and regulations and implementation of environmental impact assessments as needed, and has committed to confirm the implementation during the project selection process. Sustainalytics views that the Group's process for managing environmental and social risks is adequate and is in alignment with market practice. Please see Section 2 for details.
- Management of Proceeds:
  - The proceeds of NTT Group's green bond and/or green loan will be managed by NTT Finance Corporation. The Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will track and manage the allocated and unallocated amounts of the proceeds using an internal management system every quarter. NTT Group intends to allocate the proceeds within 24 months from green bond issuance and/or green loan execution. For unallocated proceeds, the equivalent amounts are managed as cash or cash equivalent. Sustainalytics views the Group's management of proceeds as aligned with market practice.
- Reporting:
  - NTT Group intends to annually disclose allocation reporting and impact reporting on its Group website or an integrated report. It is also committed that, when a significant change occurs in the status of the fund after proceeds are fully allocated, the Group will disclose such in a timely manner.
  - Allocation reporting, which will be conducted until the proceeds are fully allocated, will include the status of the allocation to eligible projects, an overview of the allocated eligible projects (including the age of the assets and remaining useful life), the allocated and unallocated amounts of the proceeds, the share of finance and refinance, and the allocation policy including planned period for the full amount of the proceeds to be allocated if there is any unallocated amount. Impact reporting will be conducted until the redemption of green bonds and/or repayment of green loans is completed and will disclose qualitative and quantitative indicators, including (depending on the content of eligible projects) the amount of CO<sub>2</sub> emissions reduced, the amount of CO<sub>2</sub> emissions, the number of 5G base stations established, effects intended by R&D projects, power generation capacity and/or the amount of power generated in renewable energy projects, as well as the type and level of green building certification acquired and the



period of the acquisition and reacquisition. Sustainalytics considers the Group's reporting to be aligned with market practice.

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

Sustainalytics has determined that the Framework aligns to the four core components of the GBP and GLP. For detailed information please refer to Appendix 3: Green Bond/Green Bond Programme External Review Form.

#### **Alignment with Japan's Green Bond Guidelines 2020 and Expected Elements of Green Loans under the Green Loans and Sustainability Linked Loan Guidelines 2020**

Sustainalytics is of the opinion that the Framework is in line with Japan's Green Bond Guidelines 2020 as well as Expected Elements of the green loan section under the Green Loan and Sustainability Linked Loan Guidelines 2020, developed by the Ministry of the Environment of Japan. The guidelines communicate what an issuer should do to issue a credible green bond or loan. Sustainalytics assessed the alignment between the Framework and the elements described with the word "should" outlined in Japan's guidelines 2020 on green bonds and green loans. For detailed information please refer to Appendix 2: Alignment with Japan's Green Bond Guidelines 2020 as well as Expected Elements of Green Loans under the Green Loans and Sustainability Linked Loan Guidelines 2020.

## **Section 2: Sustainability Strategy of NTT Group**

### **Contribution of framework to NTT Group's sustainability strategy**

In November 2021, NTT Group established the NTT Group Global Sustainability Charter<sup>12</sup> aiming to simultaneously achieve corporate growth and resolve social issues. The Charter sets "Ensuring the coexistence of nature and humanity" as one of the three themes for a sustainable society, and sets three challenges: reduce GHG emissions, promote the effective use of resources, and promote initiatives related to conserving ecosystems within nature. With regard to reducing GHG emissions, the Group has committed to address five activities: (1) promoting energy conservation, (2) reducing power consumption by introducing IOWN technologies, (3) developing and expanding the use of renewable energy, (4) providing new services that contribute to carbon neutrality, and (5) creating innovative environmental and energy technologies.

In May 2020, the Group formulated the "Environment and Energy Vision," in which it committed to contributing to the reduction of the environmental impact of society as a whole by promoting businesses and R&D that contribute to the reduction of environmental impact. In September 2021, NTT Group updated the Vision as "NTT Green Innovation toward 2040" and set a GHG emission reduction target (Scope 1 + Scope 2) in accordance with the science-based target of 1.5 degrees Celsius temperature increase, aiming to reduce GHG emissions by 80% by 2030 (compared to FY2013) and to achieve carbon neutrality by 2040 across the Group.<sup>13</sup>

In order to achieve carbon neutrality, NTT Group aims to reduce GHG emissions from its business activities by 45% compared to the business-as-usual (BAU) scenario by 2040 through the introduction of renewable energy. By FY2030, the Group aims to generate about half of the renewable energy used in Japan from NTT-owned power sources, which will be achieved by developing power sources and expanding the use of green power at its business sites. In addition, by reducing electricity consumption, NTT Group aims to reduce GHG emissions from its business activities by 55% by FY2040, compared to the BAU scenario. NTT Group plans to achieve the majority of this reduction target by reducing electricity consumption through the introduction of IOWN, aiming to reduce GHG emissions from electricity consumption by 45% by FY2040 compared to the BAU scenario. Under the IOWN concept, the Group aims to realize the next-generation communications infrastructure by 2030 that helps significantly reduce power consumption of computer terminals and networks by applying optical technologies<sup>14</sup>. As part of this effort, NTT concluded a three-year joint research agreement with Intel Corporation, which has a rich portfolio of technologies and expertise on hardware and

<sup>12</sup> NTT Group, "NTT Group Global Sustainability Charter", at: <https://group.ntt/en/newsrelease/2021/11/10/pdf/211110da.pdf>

<sup>13</sup> NTT Group, "Environment and Energy Vision", at: <https://group.ntt/en/environment/management/vision/>

<sup>14</sup> NTT Group, "R&D IOWN", at: <https://www.rd.ntt/e/iown/>

software<sup>15</sup>. Furthermore, in July 2021, it established the NTT IOWN Integrated Innovation Center by bringing together development resources of NTT Laboratories.<sup>16</sup>

As other activity targets (KPIs) related to GHG reduction, the Company aims to achieve carbon neutrality of data centers (Scope1+2) by 2030. Moreover, the Group has set the goal of doubling the power efficiency per data transmission in its telecommunications businesses by 2025 (compared to FY2017) and by 10 times or more by 2030 (compared to FY2013). The Group has been working towards reducing the energy consumption of communications equipment, increasing the efficiency of networks and data centers, and promoting R&D that contributes to energy conservation. Furthermore, NTT Group has set the target of contributing to reducing the GHG emissions of society through the Group's products and services by at least 10 times more than NTT Group's own emissions by 2030. In this way, the Group is aiming to contribute to the reduction of GHG emissions of society as a whole through its business activities<sup>17</sup>. In the real estate business by NTT Urban Development Corporation, the Group utilizes green building certification to promote efforts to reduce the burden on the environment, including the control of GHG emissions, effective utilization of resources, and reduction of waste, as stipulated in its Environmental Policy.<sup>18</sup>

Given the abovementioned environmental goals of NTT Group, Sustainalytics considers that NTT Group is well positioned to issue green bonds and execute green loans. Moreover, Sustainalytics believes that the use of proceeds defined by the Framework is consistent with and contributes to the realization of the Group's sustainability charter and long-term environmental goals.

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

While NTT Group's eligible projects generate positive environmental impact, Sustainalytics recognizes that that these projects are exposed to environmental and social risks. Major risks include the contamination of water, air and soil, negative effects on the ecology and local residents, and safety and sanitation risks with regard to workers due to development, construction and operation of buildings and renewable energy generation facilities. The construction and operation of data centers could result in the infringement of human rights in the supply chain to obtain mineral resources, information leakage, the invasion of data privacy, and an increase in power consumption. Sustainalytics believes that NTT Group is prepared to manage and reduce the risks associated with eligible projects by applying the following policies and processes:

- Within the framework, NTT Group commits to confirming the compliance with environmental laws and regulations of the country or municipality where the project is located, providing sufficient explanation to local residents and conducting environmental assessments as necessary. As main environmental laws and regulations related to eligible projects, NTT Group names the Environmental Impact Assessment Law and environmental impact assessment ordinances set by local governments for renewable energy projects, as well as the Soil Contamination Countermeasures Act and the Construction Material Recycling Law in relation to green buildings. Additionally, with respect to the treatment of hazardous waste and the storage, management and disposal of polychlorinated biphenyls (PCBs) equipment and contaminants, the Group commits within the Framework to ensure compliance with the Waste Management and Public Cleansing Law and Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, respectively.
- To reduce the environmental impact of the entire life cycle of data centers and other buildings owned and managed by the Group, NTT Group has established the NTT Group Green Design Guideline for Buildings<sup>19</sup> to determine matters to be observed, such as energy efficiency, the reduction of toxic substances uses, and the effective utilization of resources. In addition, to ensure energy conservation in the development and procurement of ICT equipment used by the NTT Group, the Group has compiled the NTT Group Green Procurement Standards<sup>20</sup> and set basic policies and target values for each equipment. Furthermore, the Group is working to mitigate environmental risks by introducing environment management systems including an international standard, ISO14001.<sup>21</sup>

<sup>15</sup> NTT, "NTT Announces Technology Collaboration Targeted at Next Generation Communications Infrastructure for Innovative Optical & Wireless Network", at: <https://group.ntt/en/newsrelease/2020/05/14/200514a.html>

<sup>16</sup> NTT, "Reorganization of NTT Laboratories", at: <https://group.ntt/en/newsrelease/2021/05/12/210512d.html>

<sup>17</sup> NTT Group, "Environmental Indicators and Targets" (Japanese only), at: <https://group.ntt/jp/environment/management/statement/index.html>

<sup>18</sup> NTT Urban Development Corporation, "Environmental management system" (Japanese only), at:

<https://www.nttud.co.jp/csr/environment/management.html>

<sup>19</sup> NTT Group, "NTT Group Green Design Guideline for Buildings", at: [https://group.ntt/en/design/pdf/green\\_design\\_e.pdf](https://group.ntt/en/design/pdf/green_design_e.pdf)

<sup>20</sup> NTT Group, "NTT Group Green Procurement Standards", at: [https://www.ntt-f.co.jp/csr/env-prot/pdf/2205\\_nttf\\_green\\_procurement\\_standards\\_e.pdf](https://www.ntt-f.co.jp/csr/env-prot/pdf/2205_nttf_green_procurement_standards_e.pdf)

<sup>21</sup> NTT Group, "Group management measures", at: <https://group.ntt/en/environment/management/group/>

- In response to the supply chain risks associated with the Group's procurement activities, including data center business, the Group established the NTT Group Guidelines for Sustainability in Supply Chain<sup>22</sup>, and requests suppliers to conform to requirements in seven areas of human rights and labor, occupational health and safety, environment, fair trade and ethics, product quality and safety, information security, and formulation of business continuity plans, and conducts risk evaluation of main suppliers based on the guideline.<sup>23</sup> Furthermore, the Group formulated the NTT Group Human Rights Policy<sup>24</sup> and conducts regular due diligence throughout its value chain. If human rights violations are identified, NTT Group is committed to addressing and improving the situation including suspending the transaction. The Group is also committed to taking steps to avoid the use of conflict minerals, which are a source of funding for armed groups, in its procurement activities, by establishing its basic policy on conflict minerals.<sup>25 26</sup>
- Through the NTT Group Information Security Policy<sup>27</sup>, NTT Group is working to mitigate the information security risk at data centers. Within the policy, the Group commits to continuously implement measures to protect information, including the protection of secrecy of telecommunications, the implementation of security measures to prevent the loss, falsification, or leakage of information, supervision of outsourcing contractors, etc.
- To assure the safety and health of workers, the Group commits to complying with Labor Standards Act and the Industrial Safety and Health Act, and other relevant laws and regulations, and has established internal rules.<sup>28</sup>

Based on the above, Sustainalytics believes that NTT Group is well-positioned to manage and reduce the environmental and social risks associated with the eligible projects.

### Section 3: Impact of Use of Proceeds

All three use of proceeds categories are aligned with those recognized by the GBP and GLP. Sustainalytics explains why those project categories produce positive environmental impacts in Japan as follows:

#### **Contribution to climate change measures through the improvement of the energy efficiency of communications networks and data centers**

Looking at global electricity demand in 2020, data networks consumed 260-340 TWh, or 1.1-1.4% of global electricity use, while data centers consumed 250 TWh, or 1% of global electricity use.<sup>29</sup> Global IP traffic (data traffic) increased by about 15 times from 2010 to 2020.<sup>30</sup> It is expected to reach 4.8 Zettabyte by 2022, an increase by about 3.2-times from 2017.<sup>31</sup> With an increase in data traffic, the demand for communications networks and data centers is expected to increase. In order to curb the increase in power consumption and CO<sub>2</sub> emissions from information and communications infrastructure, continuous improvement of energy efficiency is required.

In the "Greenhouse gas emissions trajectories for the information and communication technology (ICT) sector compatible with the UNFCCC Paris Agreement,"<sup>32</sup> which outlines recommendations for the ICT industry to comply with the Paris Agreement, the International Telecommunication Union (ITU) requires the entire industry to reduce GHG emissions by 45% from 2020 levels by 2030. Specific measures for decarbonization of the industry that ITU shows include the introduction of measures to improve energy efficiency in

<sup>22</sup> NTT Group, "NTT Group Guidelines for Sustainability in Supply Chain", at: <https://group.ntt/en/newsrelease/2022/02/16/pdf/220216ab.pdf>

<sup>23</sup> NTT Group, "NTT Group Sustainability Report 2021", at: [https://group.ntt/en/csr/data/pdf/sustainability\\_report\\_2021\\_databook.pdf](https://group.ntt/en/csr/data/pdf/sustainability_report_2021_databook.pdf)

<sup>24</sup> NTT Group, "NTT Group Human Rights Policy", at: <https://group.ntt/en/newsrelease/2021/11/10/pdf/211110ca.pdf>

<sup>25</sup> NTT Group, "NTT Group Sustainability Report 2021", at: [https://group.ntt/en/csr/data/pdf/sustainability\\_report\\_2021\\_databook.pdf](https://group.ntt/en/csr/data/pdf/sustainability_report_2021_databook.pdf)

<sup>26</sup> NTT Group, "NTT Group Guidelines for Sustainability in Supply Chain", at: <https://group.ntt/en/newsrelease/2022/02/16/pdf/220216ab.pdf>

<sup>27</sup> NTT Group, "NTT Group Information Security Policy", at: [https://group.ntt/en/g\\_policy/](https://group.ntt/en/g_policy/)

<sup>28</sup> NTT Group, "NTT Group Sustainability Report 2021", at: [https://group.ntt/en/csr/data/pdf/sustainability\\_report\\_2021\\_databook.pdf](https://group.ntt/en/csr/data/pdf/sustainability_report_2021_databook.pdf)

<sup>29</sup> International Energy Agency (IEA), "Data Centers and Data Transmission Networks", at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

<sup>30</sup> International Energy Agency (IEA), "Data Centers and Data Transmission Networks", at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

<sup>31</sup> Cisco, "Cisco Visual Networking Index: Forecast and Trends, 2017-2022", at:

<https://twiki.cern.ch/twiki/pub/HEPIX/TechwatchNetwork/HtwNetworkDocuments/white-paper-c11-741490.pdf>

<sup>32</sup> International Telecommunication Union (ITU), "Greenhouse gas emissions trajectories for the information and communication technology sector compatible with the UNFCCC Paris Agreement", at: <https://www.itu.int/rec/T-REC-L.1470-202001-I>



communications networks and buildings and the use of renewable energy. The Japanese government also formulated the “Green Growth Strategy”<sup>33</sup> for achieving carbon neutrality in 2050, which calls for facilitating the reduction of CO<sub>2</sub> emissions in communications networks and data centers. The target it has set for data centers is to improve the energy efficiency of all new data centers by 30% or more by 2030 with a view to achieving carbon-neutral data centers by 2040.

Based on the Framework, in the energy efficiency category, NTT Group intends to allocate the green bond and/or green loan proceeds to projects that contribute to reducing power consumption of communications networks and investments in highly efficient data centers. Sustainalytics positively views that NTT Group’s use of proceeds will help reduce power consumption of communications networks and data centers, whose demands are expected to grow, and contribute to achieving Japan’s climate targets.

### **Necessity of promoting renewable energy**

Regarding the composition of Japan’s power sources in 2020, renewable energy (solar, wind, biomass, geothermal, and hydro) accounted for 19.8%, while fossil fuel-based energy accounted for 76.3%.<sup>34</sup> In April 2021, the Japanese government has committed to reducing GHG emissions by 46% against the 2013 level by 2030.<sup>35</sup> As part of the energy mix aligned with this commitment, it aims to increase in the proportion of renewable energy to 36–38% by 2030.<sup>36</sup> Furthermore, the government pledged to achieve net-zero GHG emissions by 2050,<sup>37</sup> and formulated the Green Growth Strategy,<sup>38</sup> which sets out the policy directions and action plans to achieve carbon neutrality in 2050. In the Strategy, the government states that it will promote the use of renewable energy, with the reference target of reaching 50–60% of renewable energy share in the country’s energy supply by 2050.

In the Framework, NTT Group specifies that it will allocate the proceeds to renewable energy-related projects. Sustainalytics views that the Group’s use of proceeds will help promote the introduction of renewable energy in Japan and contribute to achieving the Japanese government’s mid- and long-term climate goals.

### **Importance of promoting green buildings**

In 2020, CO<sub>2</sub> emissions from buildings accounted for approximately 30% of Japan’s total CO<sub>2</sub> emissions.<sup>39 40</sup> In the updated NDC submitted to the UN in 2021, the Japanese government has set a target of CO<sub>2</sub> emissions reduction from residential, commercial and other buildings by 60% by 2030, while it has committed to increasing its GHG emissions reduction target for the entire economy from 26% to 46% against the 2013 level by 2030 and to achieving net zero emissions by 2050.<sup>41</sup>

Given the significant contribution of buildings in the country’s total CO<sub>2</sub> emissions, the Japanese government has been working to strengthen energy saving measures in buildings. The government promulgated the Building Energy Efficiency Act in 2015, which sets mandatory energy efficiency standards for large-scale non-residential buildings.<sup>42</sup> Improving the energy efficiency of buildings plays a significant role in Japan’s measures against climate change, and the Japanese government is aiming to achieve this goal by promoting compliance with energy saving standards in new buildings, refurbishing existing buildings, implementing energy management systems, and introducing efficient lighting equipment.<sup>43</sup>

<sup>33</sup> “Green Growth Strategy through Achieving Carbon Neutrality in 2050”, at: <https://www.meti.go.jp/press/2021/06/20210618005/20210618005-3.pdf>

<sup>34</sup> Agency for Natural Resources and Energy, “FY2020 Energy Supply and Demand Report (Final Figures) (Japanese only)”, at: <https://www.meti.go.jp/press/2022/04/20220415003/20220415003-1.pdf>

<sup>35</sup> The Prime Minister’s Office of Japan, “Press conference by the Prime Minister on the greenhouse gas reduction targets and the declaration of a state of emergency (Japanese only)”, at: [https://www.kantei.go.jp/jp/99\\_suga/statement/2021/0422kaiken.html](https://www.kantei.go.jp/jp/99_suga/statement/2021/0422kaiken.html)

<sup>36</sup> Ministry of Economy, Trade and Industry, “Outline of the Basic Energy Plan (Draft)”, at: [https://www.enecho.meti.go.jp/committee/council/basic\\_policy\\_subcommittee/2021/046/046\\_004.pdf](https://www.enecho.meti.go.jp/committee/council/basic_policy_subcommittee/2021/046/046_004.pdf)

<sup>37</sup> Prime Minister of Japan and His Cabinet, “Policy Speech by the Prime Minister to the 203rd Session of the Diet”, at: [https://japan.kantei.go.jp/99\\_suga/statement/202010/\\_00006.html](https://japan.kantei.go.jp/99_suga/statement/202010/_00006.html)

<sup>38</sup> “Green Growth Strategy through Achieving Carbon Neutrality in 2050”, at: <https://www.meti.go.jp/press/2021/06/20210618005/20210618005-3.pdf>

<sup>39</sup> “Greenhouse Gas Emissions in Fiscal Year 2020 (Final Figures) (Japanese only)”, at: [https://www.nies.go.jp/whatsnew/GHG2020\\_Final\\_Main\(J\).pdf](https://www.nies.go.jp/whatsnew/GHG2020_Final_Main(J).pdf)

<sup>40</sup> The combined data for the residential sector and commercial and other sector are referred to as the CO<sub>2</sub> emissions for buildings.

<sup>41</sup> “Japan’s Nationally Determined Contribution (NDC)”:

[https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/JAPAN\\_FIRST%20NDC%20\(UPDATED%20SUBMISSION\).pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/JAPAN_FIRST%20NDC%20(UPDATED%20SUBMISSION).pdf)

<sup>42</sup> Institute for Building Environment and Energy Conservation, “Overview of the Act on the Improvement of Energy Consumption Performance of Buildings (Building Energy Efficiency Act)”, at: <https://www.mlit.go.jp/common/001134876.pdf>

<sup>43</sup> “Japan’s Nationally Determined Contribution (NDC)”:

[https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/JAPAN\\_FIRST%20NDC%20\(UPDATED%20SUBMISSION\).pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Japan%20First/JAPAN_FIRST%20NDC%20(UPDATED%20SUBMISSION).pdf)

In the Framework, NTT Group intends to allocate the proceeds from its green bonds and/or green loans to green buildings that have received green building certification. Green building certification requirements stipulated in the eligibility criteria include energy efficiency properties, as well as the building performance and operation in the areas of resource conservation, pollution prevention and biodiversity. Sustainalytics considers that the use of proceeds will help promote green buildings in Japan and contribute to mitigating buildings' environmental impacts and achieving Japan's climate goals.

#### 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 green bond and green loan 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                                                                                                                                                                                                                                       |
| 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 |
| Renewable Energy         | 7. Affordable and Clean Energy             | 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix                                                                                                                                                                                                                    |

#### Conclusion

NTT Group intends to issue green bonds and execute green loans based on the NTT Group Green Finance Framework and allocate the proceeds to new or existing projects related to 1) Energy Efficiency, 2) Green Buildings and 3) Renewable Energy. Under the NTT Group Global Sustainability Charter and Environment and Energy Vision, NTT Group has set numerical goals for reducing its own environmental impact and reducing GHG emissions of society through its business activities, and the use of green bond and/or green loan proceeds are expected to contribute to achieving these long-term goals. Moreover, Sustainalytics believes that the use of proceeds leads to advance the climate change measures of the Japanese government and SDGs 7 and 9 of the United Nations, by improving the energy efficiency of buildings and data centers where demand is expected to increase, as well as contributing to expand the introduction of renewable energy.

The Framework defines the Group's eligibility criteria and policies for project evaluation and selection process, management of proceeds, and reporting, which Sustainalytics views as aligned with market practice. In the Framework, NTT Group explains its measures to manage and mitigate the environmental and social risks associated with eligible projects, and Sustainalytics believes that the Group has adequate policies and processes in place.

Considering the above, Sustainalytics is of the opinion that the Framework is aligned with the four core components of Green Bond Principles 2021 and Green Loan Principles 2021, Japan's Green Bond Guidelines 2020 as well as Expected Elements of Green Loans under the Green Loans and Sustainability Linked Loan Guidelines 2020, and is credible and transparent.

## Appendices

### Appendix 1: Overview and Comparison of Green Building Certification Schemes

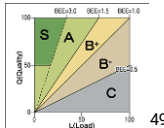
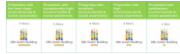
|                                                       | LEED <sup>44</sup>                                                                                                                                                                                                                                                                               | CASBEE Certification <sup>45</sup>                                                                                                                                                                                                                                                                                                                             | BELS <sup>46</sup>                                                                                                                                                                                                                                                                                                                 | DBJ Green Building Certification <sup>47</sup>                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Comprehensive Assessment System for Built Environment Efficiency (CASBEE) Certification is a green building certification scheme in Japan, which a third party certifies the environmental performance of buildings. The certification scheme includes, based on types of buildings: CASBEE for Buildings, CASBEE for Real Estate, and CASBEE for Housing. | The Building-Housing Energy-efficiency Labelling System (BELS) is an energy performance label, issued under guidelines established by Japan's Ministry of Land, Infrastructure, Transport, and Tourism. The BELS certification scheme evaluates primary energy consumption in order to measure performance of energy conservation. | The Development Bank of Japan (DBJ) Green Building Certification Programme was launched by Development Bank of Japan in 2011 and is operated in conjunction with the Japan Real Estate Institute (JREI), a major appraisal firm in Japan. The certification scheme is recognized as one of Japan's major regional standards. The certification is available for office buildings, logistics, residential, and retail facilities. |
| Certification levels                                  | Certified<br>Silver<br>Gold<br>Platinum                                                                                                                                                                                                                                                          | C (Poor)<br>B- (Slightly Poor)<br>B+ (Good)<br>A (Very Good)<br>S (Excellent)<br><br>* 4-grade evaluation for CASBEE for Real Estate excluding C rank                                                                                                                                                                                                          | 1 Star<br>2 Stars<br>3 Stars<br>4 Stars<br>5 Stars                                                                                                                                                                                                                                                                                 | 1 Star<br>2 Stars<br>3 Stars<br>4 Stars<br>5 Stars                                                                                                                                                                                                                                                                                                                                                                               |
| Areas of Assessment: Environmental Project Management |                                                                                                                                                                                                                                                                                                  | CASBEE assesses two main factors: inside and outside the building site, which translate into Q (Built Environment Quality) and, L (Built Environment Load), respectively.<br><br>* The above are not applied to CASBEE for Real Estate                                                                                                                         | None                                                                                                                                                                                                                                                                                                                               | Evaluation of DBJ Green Building Certification includes construction specifications, environmental features as well as social factors.                                                                                                                                                                                                                                                                                           |

<sup>44</sup> More information on the LEED certification scheme at: <https://new.usgbc.org/leed>.

<sup>45</sup> Institute for Building Environment and Energy Conservation, "CASBEE certification scheme (Japanese only)", at: <http://www.ibec.or.jp/CASBEE/certification/certification.html>.

<sup>46</sup> Association for Housing Performance Evaluation & Labeling, "Building-Housing Energy-efficiency Labelling System Building Energy-efficiency Performance Labeling System (Japanese only)", at: <https://www.hyoukakyokai.or.jp/bels/bels.html>.

<sup>47</sup> Development Bank of Japan, Japan Real Estate Institute (JREI), "DBJ Green Building", at: <http://igb.jp/en/index.html>.

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Areas of Assessment: Environmental Performance of the Building | <ul style="list-style-type: none"> <li>• Energy and atmosphere</li> <li>• Sustainable Sites</li> <li>• Location and Transportation</li> <li>• Materials and resources</li> <li>• Water efficiency</li> <li>• Indoor environmental quality</li> <li>• Innovation in Design</li> <li>• Regional Priority</li> </ul>                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Energy Efficiency</li> <li>• Resource efficiency</li> <li>• Local environment</li> <li>• Indoor environment</li> </ul> <p>* Areas for assessment of CASBEE for Real Estate are energy/GHG, water, resource, biodiversity, indoor environment</p>                                                                                                                                                                                                            | Energy efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>•Energy &amp; Resources (Energy conservation, resource conservation, etc.)</li> <li>•Amenity (Convenience and comfort)</li> <li>•Resilience (Environmental risks, legal compliance, etc.)</li> <li>•Community &amp; Diversity (Consideration for the surrounding environment and biodiversity, etc.)</li> <li>•Partnership (information disclosure, etc.)</li> </ul> |
| 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>Score-based performance level.</p> <p>CASBEE uses the BEE (Built Environment Efficiency) as its assessment indicator, which is calculated from Q (Built Environment Quality) as the numerator and L (Built Environment Load) as the denominator. Q and L are obtained through the classification and rearrangement of the four areas of assessment.</p> <p>* CASBEE for Real Estate does not use BEE, additional point system. Certification will not be given, if required item are not met.</p> | <p>Score-based performance level.</p> <p>The BELS score is based on the Building Energy Index, obtained by comparing the energy consumption of a building to the standard primary energy consumption of the building type in official guidelines.</p> <p>A two-star rating is equivalent to meeting existing energy conservation standards, with higher star ratings implying greater savings.</p> <p>The score is calculated by an accredited third party.</p> | <p>Score-based performance level.</p> <p>The assessment has a full score of 300 points and consists of 85 questions, 73 of which are regular questions and 12 of which are questions on innovative initiatives.</p> <p>JREI will conduct on the ground review of building performance on the indicators above, and a committee set in JREI will decide the result of certification rank.</p>                |
| Performance display                                            |  <p>Platinum</p> <p>80+ points earned 48</p>                                                                                                                                                                                                                                                                                                                                                                              |  <p>49</p>                                                                                                                                                                                                                                                                                                                                                                                                        |  <p>50</p>                                                                                                                                                                                                                                                                                                                                                                 |  <p>51</p>                                                                                                                                                                                                                                                                                                             |

<sup>48</sup> U.S. Green Building Council, "Green building leadership is LEED", at: <https://new.usgbc.org/leed>

<sup>49</sup> Institute for Building Environment and Energy Conservation, "Method of Evaluation and Built Environment Efficiency (BEE)", at: [http://www.ibec.or.jp/CASBEE/CASBEE\\_outline/method.html](http://www.ibec.or.jp/CASBEE/CASBEE_outline/method.html).

<sup>50</sup> Institute for Building Environment and Energy Conservation, "Display example of BELS (Japanese only)", at: [https://www.hyoukakyokai.or.jp/bels/pdf/170401bels\\_07.pdf](https://www.hyoukakyokai.or.jp/bels/pdf/170401bels_07.pdf).

<sup>51</sup> Development Bank of Japan, "DBJ Green Building", at: [http://www.dbj.jp/en/pdf/service/finance/g\\_building/gb\\_presentation.pdf](http://www.dbj.jp/en/pdf/service/finance/g_building/gb_presentation.pdf).

|                            |                                       |                                                                                                                                                                                                                                                                         |                                                                                                                                                                              |                                                                                                                                                                                                                                                               |
|----------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Qualitative considerations | Worldwide recognition and application | CASBEE is continuously developed based on industry-government-academia collaboration under the support of Ministry of Land, Infrastructure, Transport and Tourism. In Japan, many local governments have made CASBEE assessment results mandatory for building permits. | BELS is aligned with official government standards.<br><br>The scheme assesses only energy performance, without any broader consideration of holistic environmental factors. | In addition to LEED and CASBEE, DBJ Green Buildings Certification Programme is considered as one of the green building standards in Japan. According to its website, as of March 2021, 1073 properties in Japan are certified by the programme. <sup>52</sup> |
|----------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

<sup>52</sup> Development Bank of Japan, Japan Real Estate Institute (JREI), "DBJ Green Building", at: <http://igb.jp/en/index.html>.



## Appendix 2: Alignment with Japan's Green Bond Guidelines 2020 and Expected Elements of Green Loans under the Green Loan and Sustainability Linked Loan Guidelines 2020

| Four elements                                   | Alignment | Sustainalytics' comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Use of Proceeds                              | Yes       | The eligible categories for use of proceeds defined in the Framework of NTT Group – 1) Energy efficiency, 2) Green buildings and 3) Renewable energy – are recognized as project categories with a clear environmental impact in Japan's Green Bond Guidelines 2020 as well as Expected Elements of Green Loans under the Green Loans and Sustainability Linked Loan Guidelines 2020. In addition, the Framework indicates specific business categories of use of proceeds for investors to evaluate eligibility of the use of proceeds. The process to mitigate environmental risks associated with projects are described in the Framework for investors to review in advance. In cases of refinancing assets that require long-term maintenance through multiple issuances of green bonds or executions of green loans, the Group has committed to, disclose the age of the assets, remaining useful life, and the amount of refinancing at the time of green bond issuance or green loan execution. Moreover, the Group has committed that, if part of a multiple tranche of a loan is a green loan, the green tranche will be clearly designated and tracked in an appropriate manner. |
| 2. Process for Project Evaluation and Selection | Yes       | The Framework demonstrates the NTT Group Global Sustainability Charter and Environment and Energy Vision that NTT Group aims to achieve through the issuance of green bonds and/or execution of green loans. The eligibility criteria, which serve as standards for project evaluation and selection, are also defined. Projects are evaluated and selected by NTT Group's affiliated companies which operate the projects, the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters, and NTT based on eligible criteria. The director in charge of the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters makes the final decision.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3. Management of Proceeds                       | Yes       | The Framework describes that the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters tracks and manages the proceeds. To be specific, every quarter, it is confirmed that the sum of the allocated and unallocated amounts of the proceeds matches the total amount of the proceeds using an internal control system. NTT Group plans to allocate the proceeds within 24 months from green bond issuance and/or green loan execution. As for unallocated proceeds, the equivalent amounts are managed as cash or cash equivalent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. Reporting                                    | Yes       | Until the proceeds are fully allocated, NTT Group is committed that it will disclose the status of the allocation of the proceeds on its group website or integrated report every year. Should a significant change occur in the status of the fund thereafter, such will be disclosed in a timely manner. The Group plans to disclose the status of the allocation to eligible projects, an overview of the allocated eligible projects (including the age of the assets and remaining useful life), the allocated and unallocated amounts of the proceeds, the share of finance and refinance, and the planned period for the full amount of the proceeds to be allocated if there is any unallocated amount. Until                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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the redemption of the green bond or repayment of the green loan is completed, impact reporting shall be annually presented. The Group intends to disclose environmental improvement indicators, including (depending on the content of eligible projects) the amount of CO<sub>2</sub> emissions reduced and CO<sub>2</sub> emissions, the names of green buildings, the level of certification acquired, the period of the acquisition/reacquisition, and power generation capacity and/or the amount of power generated.

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## Appendix 3: Green Bond / Green Bond Programme - External Review Form

### Section 1. Basic Information

|                                                                     |                                   |
|---------------------------------------------------------------------|-----------------------------------|
| Issuer name:                                                        | NTT Group                         |
| Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: | NTT Group Green Finance Framework |
| Review provider's name:                                             | Sustainalytics                    |
| Completion date of this form:                                       | June 17, 2022                     |
| 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 GBPs:

- |                                                            |                                                                                  |
|------------------------------------------------------------|----------------------------------------------------------------------------------|
| <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, 1) Energy Efficiency, 2) Green Buildings, and 3) Renewable Energy, are aligned with those recognized by the Green Bond Principles 2021 and Green Loan Principles 2021. Sustainalytics considers that NTT Group's eligible projects will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7 and 9.

#### Use of proceeds categories as per GBP:

- |                                                                                                                                                    |                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Renewable energy                                                                                               | <input checked="" type="checkbox"/> Energy efficiency                                                    |
| <input type="checkbox"/> Pollution prevention and control                                                                                          | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation                                                                         | <input type="checkbox"/> Clean transportation                                                            |
| <input 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 GBPs | <input type="checkbox"/> Other ( <i>please specify</i> ):                                                |

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

## 2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

NTT Group's affiliated companies will respectively evaluate and select eligible projects based on the eligible criteria, and the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will select projects based on the NTT Group Global Sustainability Charter, in consultation with Nippon Telegraph and Telephone Corporation. The director in charge of the Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will make the final decision. NTT Group has established a process for reducing environmental and social risks, and applies it to all allocation decisions made under the Framework. Sustainalytics views this risk management process as appropriate. NTT Group's process to evaluate and select projects is aligned with market practice.

#### Evaluation and selection

- |                                                                                                                    |                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" 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 |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available       | <input type="checkbox"/> Other ( <i>please specify</i> ):                                                                     |

**Information on Responsibilities and Accountability**

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

**3. MANAGEMENT OF PROCEEDS**

Overall comment on section (if applicable):

The proceeds will be managed by NTT Finance Corporation. The Group Treasury Department of NTT Finance Corporation's Finance and Accounting Business Headquarters will track and manage the allocated and unallocated amounts of the proceeds using an internal management system. For unallocated proceeds, the equivalent amount of proceeds is to be managed as cash or cash equivalent. The Group's proceeds management process is aligned 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):

NTT Group is committed to reporting on the allocation and positive environmental impacts annually. Allocation reporting will include an overview of allocated projects and the amount allocated and unallocated. Impact reporting will include quantitative and qualitative environmental performance indicators, including the amount of CO<sub>2</sub> emissions reduced and green building certification and level received. NTT Group's reporting is aligned with market practice.

**Use of proceeds reporting:**

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

**Information reported:**

- ☒ Allocated amounts
 ☐ Green Bond financed share of total investment
- ☒ Other (*please specify*): Overview of eligible projects funded, ratio of finance and refinance, unallocated amount, planned allocation period

**Frequency:**

- ☒ Annual
 ☐ Semi-annual
- ☒ Other (*please specify*): In a timely manner, in the event of a significant change in the status of funds occur after full allocation

**Impact reporting:**

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

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

- ☒ GHG Emissions / Savings
 ☐ Energy Savings
- ☐ Decrease in water use
 ☒ Other ESG indicators (*please specify*): The number of 5G base stations established; number of subscribers (units); effects intended by R&D projects; progress of R&D; names of green buildings; level of certification acquired, and the timing of certification and recertification; power generation capacity and/or the amount of power generated using renewable energy

**Frequency**

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

**Means of Disclosure**

- ☐ Information published in financial report
 ☐ Information published in sustainability report
- ☐ Information published in ad hoc documents
 ☒ Other (*please specify*): NTT Group website or Integrated Report



- ☐ 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.

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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. For more than 30 years, the firm has been at the forefront of developing high-quality, innovative solutions to meet the evolving needs of global investors. Today, Sustainalytics 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. Sustainalytics also works with hundreds of companies and their financial intermediaries to help them consider sustainability in policies, practices and capital projects. With 17 offices globally, Sustainalytics has more than 1500 staff members, including more than 500 analysts with varied multidisciplinary expertise across more than 40 industry groups.

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