Evaluation Summary

Sustainalytics is of the opinion that the Lenovo Group Limited 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 - Energy Efficiency, Renewable Energy, Green Buildings, Circular Economy Adapted Products, Production and Processes, and Clean Transportation - are aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7, 9, 11 and 12.

**PROJECT EVALUATION / SELECTION** Lenovo Group Limited’s Green Financing Working Group (GFWG) will review and approve eligible projects. The GFWG is comprised of senior representatives from the Company’s Finance, Treasury, Legal, ESG, Real Estate and Global Supply Chain departments. Lenovo’s requirements and management mechanisms regarding occupational health and safety, environmental issues and business ethics, including environmental and social assessments, are applicable to all allocation decisions made under the Framework. Sustainalytics views these risk management systems as adequate and considers the project selection process to be in line with market practice.

**MANAGEMENT OF PROCEEDS** Lenovo Group Limited’s Finance Department will be responsible for managing proceeds and tracking their allocation using an internal management system overseen by the GFWG. Pending allocation, net proceeds will be temporarily held in cash, cash equivalents or deposits, subject to exclusion criteria. Full allocation is intended within 24 months from issuance. This is in line with market practice.

**REPORTING** Lenovo Group Limited intends to publish on its website both allocation and impact reporting on an annual basis until full allocation. Allocation reporting will include the allocation amount per eligible project category and geography, proportion between financing and refinancing, project examples, as well as the amount of unallocated proceeds and its temporary treatment. In addition, Lenovo is committed to reporting on relevant impact indicators. Sustainalytics views Lenovo’s allocation and impact reporting as aligned with market practice.

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1 This Second-Party Opinion updates the second-party opinion dated October 2021.
Introduction

Lenovo Group Limited (“Lenovo” or the “Company”) is a global technology company that engages in designing, developing, manufacturing and distributing personal computers, smart devices, mobile phones, infrastructure and data centre products, related services and solutions. Founded in China in 1984 and incorporated in Hong Kong in 1988, the Company and its joint ventures have a headcount of approximately 75,000 worldwide, with headquarters in Beijing, China and the United States.

Lenovo has developed the Lenovo Group Limited Green Finance Framework dated July 2022 (the “Framework”) under which it intends to issue green bonds and obtain loans and use the proceeds to finance and refinance, in whole or in part, existing and future projects aimed at improving the Company’s environmental performance mainly in China and the United States, as well as other countries where the Company operates. The Framework defines eligibility criteria in five areas:

1. Energy Efficiency
2. Renewable Energy
3. Green Buildings
4. Circular Economy Adapted Products, Production and Processes
5. Clean Transportation

Lenovo engaged Sustainalytics to review the Lenovo Group Limited Green Finance Framework and provide a Second-Party Opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP) and the Green Loan Principles 2021 (GLP). The Framework will be published in a separate document.

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

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

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

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

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.11.3, 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 Lenovo’s management team to understand the sustainability impact of its business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. Lenovo representatives have confirmed that: (1) they understand it is the sole responsibility of Lenovo to ensure that the information provided is complete, accurate and up to date; (2) 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.

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2 As of March 31, 2022, Lenovo had a workforce of approximately 75,000 people worldwide with 52,000 regular employees and 19,500 long-term contracting plant workers.
4 The Green Loan Principles are administered by the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications and Trading Association and are available at https://www.lsta.org/content/green-loan-principles/.
6 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.
Sustainalytics’ Opinion

Section 1: Sustainalytics’ Opinion on the Lenovo Group Limited Green Finance Framework

Sustainalytics is of the opinion that the Lenovo Group Limited Green Finance Framework is credible and impactful, and aligns with the four core components of the GBP and GLP. Sustainalytics highlights the following elements of Lenovo’s Green Finance Framework:

- **Use of Proceeds:**
  - The eligible categories - Energy Efficiency, Renewable Energy, Green Buildings, Circular Economy, Adapted Products, Production and Processes, and Clean Transportation are aligned with those recognized by the GBP and GLP. Sustainalytics notes that the eligible categories are expected to improve Lenovo’s environmental performance mainly in China and the United States and potentially other countries where the Company operates.
  - While Lenovo has not established a look-back period for capital expenditures, operational expenditures will be limited to 3 years for refinancing. Additionally, the Company intends to complete the full allocation of proceeds within two years from the date of issuance. This is in line with market practice.
  - Under the Energy Efficiency category, Lenovo may finance and refinance the following:
    - Installation, upgrades and retrofitting of infrastructure, equipment and systems that result in energy efficiency improvements. This may include: (i) installation of new low-energy lighting and related electrical equipment; (ii) upgrades to the energy efficiency of heating, ventilation and air conditioning (HVAC) systems and chillers; (iii) upgrading existing electric equipment with energy efficient equipment such as replacing halogen lamps with LED bulbs; (iv) building energy management systems; (v) maintenance of energy-efficient building infrastructure and systems for the purpose of extending the life of the assets; (vi) improvement of energy efficiency in Lenovo’s own production processes; and (vii) data centres and computer server room upgrades that result in an annualized power usage effectiveness below 1.5.
    - Research and development (R&D) for improving the energy efficiency of Lenovo products, such as notebooks, desktops, servers and monitors as well as that of its

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7 Lenovo has confirmed to Sustainalytics that financing of its production processes will exclude any processes that are inherently reliant on fossil fuels.
8 Upgrades to data centres may include maintenance, renovation and upgrades of cooling systems, lighting systems and hardware.
computers’ central processing units and power supply units. In addition, the Company may finance R&D on the feasibility of using sustainable aviation fuel and sustainable marine fuel for the purpose of reducing GHG emissions from its logistics operations. Lenovo has confirmed to Sustainalytics that all R&D expenses will be limited to less than 10% of net proceeds from issuances under the Framework. Sustainalytics encourages Lenovo to disclose progress information of R&D projects, including stakeholders, R&D stage and expected impact.

Lenovo has confirmed to Sustainalytics that all investments under this category will exclude projects that are inherently powered by fossil fuels or that promote fossil fuel lock-in. Sustainalytics considers the above investments to be in line with market practice and encourages the Company to report on estimated or achieved energy efficiency on a portfolio basis, where feasible. Furthermore, Sustainalytics notes that it is market expectation to specify all eligible expenditures and encourages Lenovo to report on any other expenditures it intends to include in this category.

- Under the Renewable Energy category, Lenovo may finance or refinance the construction and operation of renewable energy, such as on-site and off-site solar energy, and onshore or offshore wind energy. The Company may also finance energy production from biofuels and biogas that use sustainably sourced non-waste or waste bio-based feedstocks. In addition, Lenovo intends to finance or refinance the purchase of renewable energy through long-term (>5 years) physical power purchase agreement (PPAs). Sustainalytics views Lenovo’s renewable energy investments to be aligned with market practice. Furthermore, Sustainalytics notes that it is market expectation to specify all eligible expenditures and encourages Lenovo to report on any other expenditure it intends to include in this category.

- Under the Green Buildings category, Lenovo may finance or refinance construction, renovation and retrofitting of buildings that result in achieving the following third-party green building certification levels: Chinese Green Building Evaluation Label (Two Stars or above), BEAM Plus (Gold or above), LEED (Gold or above) or any equivalent international or local certification. Additionally, for building upgrades, Lenovo is committed to achieving a 20% energy efficiency improvement in cases where buildings have already received certification as set above. Sustainalytics notes positively the Company’s commitment to continuously improve the performance of its existing green assets. Furthermore, Sustainalytics notes that it is market expectation to specify all eligible schemes and encourages Lenovo to report on any other schemes it intends to use.

- Under the Circular Economy Adapted Products, Production and Processes category, the Company may finance or refinance the design and development of its products, packaging and services to further increase the use of recycled materials, improve product repair and recyclability, and extend product life. This may include:
  - The procurement of biomaterials such as bamboo fibre and moulded pulp certified by the Forest Stewardship Council (FSC) for packaging.
  - The procurement of recycled plastics to be used as an input in manufacturing of Lenovo products, such as laptops, desktops, workstations, monitors and accessories. Further, Lenovo confirmed that the recycled plastics procured will not be used in single-use or packaging applications. Sustainalytics notes that the extent of recycling of plastics is very low, with an estimated 9% of total global plastic waste having been recycled between 1950 and 2015, and further recognizes that improved recycling rates

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9 Lenovo intends to finance solar photovoltaic-only projects and, in the case of solar thermal or concentrated solar heat and power generation projects, at least 85% of the electricity generated from the facility will be derived from solar energy.
10 Lenovo commits to limit financing biofuels and biogas projects to those with a life cycle GHG emissions intensity below 100 gCO₂e/kWh. In addition, Lenovo will ensure that non-waste feedstocks are sustainably sourced using credible third-party certifications (i.e. Roundtable for Sustainable Biomaterials, ISCC EU/PLUS, 2BSvs, Round Table on Responsible Soy, BONSUCRO, FSC, PEFC), subject to exclusion of peat, palm oil, non-certified oil and energy crops. In addition, waste feedstocks projects will be limited to those using forestry and agricultural residues as feedstock, subject to exclusion of waste from non RSB- or RSPO-certified palm oil operations.
11 This may include buildings for residential, commercial and industrial purposes. Expenses for industrial buildings will be limited to the building envelopes that are used for production of Lenovo’s own products and meet the green building criteria of the Framework. Commercial buildings would include new data centres with PUE< 1.5. Additionally, eligible buildings will exclude buildings designed for any fossil fuels related operations.
14 LEED, at: [https://www.usgbc.org/leed](https://www.usgbc.org/leed)
alone, even if attainable, will not fully address the holistic environmental issues associated with plastics. In order to achieve full circularity, the industry needs to take substantial measures, including an increased use of sustainably sourced alternative and low-carbon materials that can be recycled indefinitely without loss of quality.

- Extension of battery lifespan through the use of lithium polymer cells, algorithms and updatable battery firmware. Lenovo specified that the financing is limited to costs associated with upgrades that will directly result in extending battery life and will exclude the production of the battery itself.
- Prolonging product end-life through: (i) increasing the repairability of PCs by improving the percentage of repairs that can be done by the customers; (ii) recycling and return programmes for batteries, IT assets and data centre infrastructure from consumer and business customers. Lenovo has confirmed to Sustainalytics that the recycling and processing of electronic waste (e-waste) will be supported by a robust electronic waste management plan.

Based on the above, Sustainalytics consider expenditures in this category to be aligned with market practice. Furthermore, Sustainalytics notes that it is market expectation to specify all eligible expenditures and encourages Lenovo to report on any other expenditure it intends to include in this category.

- Under the Clean Transportation category, Lenovo may invest in fully electric vehicles. Sustainalytics views this to be aligned with market practice.

**Project Evaluation and Selection:**
- The Company has established the Lenovo Green Financing Working Group (GFWG) to review and approve proposed projects that comply with the Framework’s eligibility criteria. Comprised of senior representatives from the Company’s Finance, Treasury, Legal, ESG, Real Estate and Global Supply Chain departments, the GFWG will review eligibility of projects on an annual basis and may reallocate proceeds from projects that no longer meet the eligibility criteria defined under the Framework or are subject to postponement, cancelation or divestment.
- The Company has in place corporate policies and management systems that address environmental and social risks in its operations and supply chains, which are applicable to all allocation decisions made under the Framework. In addition, Lenovo carries out environmental and social risk assessments of the projects to identify eligible projects. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectations. For additional detail, see Section 2.
- Based on the presence of cross-functional oversight of project selection and risk management, Sustainalytics considers this process to be in line with market practice.

**Management of Proceeds:**
- Lenovo will track the allocation of net proceeds to eligible projects using its internal management system (the “Register”). The Register will contain key information with regard to the issuing or borrowing entity and transactions, name and description of eligible projects, allocation of proceeds, balance of unallocated proceeds and temporary investment for unallocated proceeds. The Finance department is responsible for managing the proceeds, subject to oversight by the GFWG. Pending allocation, net proceeds will be temporarily held in cash, cash equivalents or deposits, subject to exclusion criteria.
- Based on the presence of an internal tracking system and the disclosure on temporary allocation, Sustainalytics considers this process to be in line with market practice.

**Reporting:**
- Lenovo commits to report on allocation and impact of the net proceeds from green debt instruments on an annual basis, or more frequent in case of material developments, until full allocation. The reports will be made available to the public on the Company’s website.
- Allocation reporting will include the allocation amount per eligible project category, allocation amount per geography, proportion between financing and refinancing, project examples, amount of unallocated proceeds and its temporary management.
- Where feasible, Lenovo will report on relevant environmental impact indicators, including annual energy conserved (in MWh or GJ), annual GHG emissions reduced or avoided (in tonnes of CO₂)

15 Unlike steel, glass and aluminium, plastics can only be recycled a finite number of times before being disposed of. In addition, recycled and bio-based plastics face end-of-life management issues similar to conventional fossil fuel plastics.
strategy and initiatives and will further the Company’s action on its key sustainability priorities.

- Based on the annual allocation and impact reporting commitment, Sustainalytics considers this in line with market practice.

Alignment with Green Bond Principles 2021 and Green Loan Principles 2021

Sustainalytics has determined that the Lenovo Group Limited Green Finance Framework aligns with the four core components of the GBP and GLP. For detailed information, please refer to Appendix 1: Green Bond/Green Loan Programme External Review Form.

Section 2: Lenovo’s Sustainability Strategy

Contribution of the Framework to Lenovo’s sustainability strategy

Lenovo’s sustainability strategy focuses on the following key environmental areas: (i) reducing GHG emissions; (ii) increasing the use of clean transportation and renewable energy in its operations; (iii) improving product energy efficiency; and (iv) waste recycling.

Under this strategy, Lenovo has committed to reduce its absolute scope 1 and 2 GHG emissions by 50% by FY2030 compared to FY2019. Furthermore, the Company aims to reduce its scope 3 GHG emissions by 2030 from a FY2019 baseline by: (i) improving energy efficiency of its products, such as desktops and servers by 50% each, and notebooks by 30%; (ii) decreasing emissions of purchased goods and services by 25%; (iii) increasing use of green transportation and reducing upstream emission by 25%. According to Lenovo’s 2021 ESG report, the Company had reduced its scope 1 and 2 GHG emissions by 10% and scope 3 emissions by 2.88% (through improvement in energy efficiency of notebooks, desktops and servers) and 12.78% (from purchased goods and services) in relation to 2019.16

To advance clean transportation, the Company reported that it used electric forklifts in all its central and regional distribution centres and warehouses in China in 2021, and increased the use of electric forklifts from 14% to 20% compared to FY2020. Additionally, use of electric trucks for last-mile delivery in China from regional distribution centres increased from 18% in FY2020 to 21% in FY2021. The Company’s initiatives to increase energy efficiency in its operations include installation of low-energy lighting and related electrical equipment, HVAC systems, improved insulation, among others. In addition, Lenovo has set a target to obtain 90% of its global operations’ electricity from renewable sources by 2025 through installing on-site renewable energy generation, procuring renewable energy through power purchase agreements and purchasing renewable energy credits. It also aims to reduce total energy consumption at its ISO 50001 certified buildings by at least 1.5% in the next three years relative to the FY2020 energy baseline.17

Furthermore, the Company’s Product End-of-Life Management programme focuses on reuse, refurbishing and recycling of products and parts of electronic products. Since 2005, the Company reports having processed approximately 290,000 tonnes of computer equipment through its contracted service providers, including Lenovo-owned and customer-returned computer equipment through its product take-back programme. In addition, Lenovo aims to recycle and reuse approximately 360,000 tonnes of end-of-life products by FY2026.18

Sustainalytics is of the opinion that the Lenovo Group Limited Green Finance Framework is aligned with the Company’s overall sustainability strategy and initiatives and will further the Company’s action on its key environmental priorities.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that the use of proceeds from the Framework will be directed towards eligible projects that are expected to have positive environmental and social impact. However, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. Some key environmental and social risks possibly associated with eligible projects could include occupational health and safety (OHS), land use and biodiversity issues associated with large-scale infrastructure development, emissions and waste generated, data privacy and security, and supply chain sustainability.

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17. Ibid.
18. Ibid.
Sustainalytics is of the opinion that Lenovo can manage or mitigate potential risks through implementation of the following:

- Lenovo has in place an OHS policy\(^ \text{19} \) by which the Company commits to mitigate OHS risks by providing a healthy and safe workplace for employees and also sets out general health and safety responsibilities for managers, employees and contractors. In addition, the Company has established and maintains OHS management systems in compliance with the ISO 45001 standard at all its manufacturing locations.\(^ \text{20} \) The OHS management system includes monthly reporting of work-related injuries, illnesses and lost days, hazard identification and risk assessment, prevention and control, incident investigation and corrective action, health and safety training and emergency preparedness.\(^ \text{21} \)

- Sustainalytics notes that Lenovo confirmed that currently the majority of the infrastructure projects to be financed with proceeds from instruments issued under the Framework would be situated in China. Under China’s Environmental Impact Assessment Act, construction, reconstruction, expansion and refurbishment of infrastructure projects that have significant environmental impact, including manufacturing of computers, smart devices and other electronic equipment, must perform an environmental impact assessment (EIA). The act also stipulates that the EIA must identify key risk factors related to local ecology, air, water, soil pollution and human health. With regard to construction projects in the US, Lenovo commits to comply with any applicable laws and regulations, such as the Clean Water Act, the Clean Air Act and other relevant federal, state and local environmental requirements.

- Lenovo also has an environmental policy\(^ \text{22} \) which requires the Company to meet or exceed applicable environmental requirements, standards and voluntary commitments, including pollution prevention and waste management. Moreover, the Company aims to ensure the sites within the scope of its environmental management system\(^ \text{23} \) are ISO 14001 certified,\(^ \text{24} \) and to monitor, track and report metrics and controls of significant environmental aspects identified on a yearly basis. The policy also focuses on advancing conservation of natural resources, utilizing minimal resources and supporting circular economy. Lenovo is also committed to reducing absolute GHG emissions of its own operations and drive similar reduction in its supply chain. To reduce energy related emissions, the Company is committed to procure energy efficient devices and has begun implementation of ISO 50001:2018 certified Energy Management System in few of its sites.\(^ \text{25} \)

- With respect to e-waste, the Company has established an Electronics End-of-Life Standard for Suppliers that outlines minimum environmental requirements for products, parts and components that will be processed for reuse (refurbishment and repair), recycling or disposal.\(^ \text{26} \)

- Lenovo is also committed to the responsible use and protection of personal information of customers and consumers.\(^ \text{27} \) The Company’s Code of Conduct sets out principles and requirements with regard to protection of privacy and data of customers, consumers and employees. Additionally, the Company has established and maintained a global privacy programme that ensures privacy compliance by, for example, identifying and responding to incidents involving personal information, integrating privacy checks into product development and conducting privacy impact assessments and privacy compliance reviews.\(^ \text{28} \)

- To minimize sustainability and ethics risks in its supply chain, Lenovo requires suppliers to comply with its Supplier Code of Conduct\(^ \text{29} \) and the Responsible Business Alliance (RBA) Code of Conduct\(^ \text{30} \)

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\(^ {20} \) Lenovo, "Regulatory Compliance ISO 45001 Certification", at: https://www.lenovo.com/ca/en/compliance/iso-45001

\(^ {21} \) Lenovo, "2020/21 Environment Social Governance report".

\(^ {22} \) Lenovo, "Environmental Affairs Policy", (2021), at: https://www.lenovo.com/us/en/social_responsibility/environmental_policy/


\(^ {24} \) Lenovo, "Regulatory Compliance ISO 14001 Certification", at: https://www.lenovo.com/ca/en/compliance/iso-14001


\(^ {27} \) Lenovo, "Lenovo Privacy Statement", (2022), at: https://www.lenovo.com/us/en/privacy/

\(^ {28} \) Lenovo, "2020/21 Environment Social Governance report”


\(^ {30} \) Responsible Business Alliance, "Code of Conduct", at: http://www.responsiblebusiness.org/code-of-conduct/
through contractual stipulations. Furthermore, the RBA Code of Conduct outlines guidelines to ensure responsible sourcing throughout the supply chain and mitigate risks associated with sourcing of conflict minerals and materials. The Company intends to ensure that suppliers meet or exceed applicable labour, environmental, health and safety, and ethics standards by a variety of measures, including due diligence, ESG risk assessment, validation and certification, training and communication. Lenovo aims to have the suppliers which account for the top 95% of the Company’s procurement spend to be audited under the RBA Validated Assessment Program or equivalent every two years. The Company has also committed to perform human rights due diligence reviews across its value chain, and provide human rights related training internally and across its supply chain.

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

Section 3: Impact of Use of Proceeds

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

Importance of green buildings in China and the US

The building and construction sector accounted for 36% of the global energy consumption and 37% of energy-related CO₂ emissions in 2020. Furthermore, CO₂ emissions from the building sector would need to decline by 50% by 2030 to align with the target of achieving a maximum 1.5°C increase in global temperature of the Paris Agreement. With regard to energy efficiency, carbon emissions related to heating, cooling and lighting buildings account for an estimated 28% of global carbon emissions. According to the IEA, the energy consumption per square metre of buildings must be reduced by 45% by 2030 from a 2020 baseline to stay on track towards reaching net zero emissions by 2050.

The building sector in China accounts for 20% of the country’s primary energy consumption, and 25% of its GHG emissions. In the US, residential and commercial buildings account for 39% of total US energy consumption and 72% of national electricity consumption. Additionally, buildings in the US account for 35% of the nation’s carbon dioxide emissions. In China, the government has developed two complementary national policies aimed at promoting and regulating green buildings: (i) the 13th Five-Year Plan for Building Energy Efficiency and Green Building Development, and (ii) the Strategic Action Plan for Energy Development (2014-2020). These plans establish a requirement for 50% of all new urban buildings to be certified green buildings, which is expected to increase the country’s share of green buildings from 5% to 28% by 2030.

31 Lenovo, “2020/21 Environment Social Governance report”
32 Ibid.
In 2021, the US launched a long-term decarbonization strategy, committing to reduce emissions by 40% by 2030 relative to a 1990 baseline, aiming to achieve net zero emissions by 2050. Nevertheless, the construction of buildings is predicted to grow at an accelerated pace until 2050 and thus expected to also significantly increase emissions. The emissions reduction pathways identified in the country's Nationally Determined Contribution for buildings, focuses on energy efficiency, efficient electric heating and cooling, wider use of heat pumps and induction stoves, and adoption of modern energy codes for new buildings.

Based on the above context, Sustainalytics is of the opinion that Lenovo’s investments in green buildings are expected to contribute to improving energy efficiency in the building sector in the US and China and contribute to the transition to a low-carbon economy in these countries.

**Importance of renewable energy in China and the US**

Global electricity demand is expected to have increased by 4.5% in 2021, due to increased economic activity and rapid growth in major emerging economies. China’s electricity generation from non-renewable sources has also grown in 2020 significantly, furthering the country’s position as the world’s largest GHG emitter. At the same time, China was the largest producer of renewable electricity in the world in 2020, particularly solar and wind power with renewable energy accounting for 40% of China’s total installed electric power capacity and 26% of total power generation, in contrast with coal’s continued dominance as an energy source for electricity in China (57%), making it the world’s largest user of coal for electricity generation. In this context, China’s 14th Five-Year Plan establishes targets for the energy sector, committing to raise its non-fossil fuel share of primary energy to 20% by 2025 and 25% by 2030, and increase the total installed capacity of solar and wind to 1,200 GW by 2030.

Similarly in the US, the electricity sector is the second-largest source of GHG emissions, accounting for 25% of total GHG emissions in 2019, with 79% of the country’s energy coming from fossil fuels and 12% from renewables such as solar. By 2021, the EIA noted an energy-related CO2 emissions increase greater than 6% and has predicted another 2% rise in 2022. To further advance renewable energy adoption, in April 2021, the US Federal Government set a goal to reach 100% carbon-free electricity by 2035.

Given this context, Sustainalytics is of the opinion that Lenovo’s investments in renewable energy projects have the potential to contribute to the national goals of China and the US to increase the non-fossil fuel share of electricity in their energy mixes and thus reduce GHG emissions in the two countries.

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46 Ibid.
47 The United States of America, “Nationally Determined Contribution”, accessed on 6 July, 2022, at: https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%202021%202021%2020%20Final.pdf
49 Reuters, “China double new renewable energy capacity in 2020”, (2021), at: https://www.reuters.com/article/us-china-energy-climatechange-idUSKBN29Q0JT
52 Race to Zero, “China’s net zero future”, (2021), at: https://racetozero.unfccc.int/chinas-net-zero-future/
Importance of recycling consumer electronics in China and the US

In 2019, the amount of electronic waste generated globally reached 53.6 million tonnes, of which only 17.4% was recycled while the remaining was dumped in landfills, incinerated or managed by the informal sector in potentially unsafe conditions. Global e-waste is expected to reach 74 Mt by 2030 due to high consumption rates of electric and electronic equipment, short life cycles, and few options for repair. In 2019, China generated 10.1 gigatonnes of e-waste and was the world’s largest e-waste producer, while the US was the second-largest e-waste producer with 7 Gt of e-waste. The increasing amounts of e-waste, low collection rates and non-environmentally sound disposal and treatment of this waste stream pose significant risks to human and environmental health as it contains heavy metals and highly toxic substances, such as mercury and brominated flame retardants. Therefore, it is essential to substantially increase global e-waste collection and recycling rates by adopting effective strategies to encourage reuse, refurbishing and recycling of e-waste in specialized facilities to prevent environmental contamination and human health risks.

To address the e-waste issue, in 2017, China developed the Circular Development Leading Actions, a policy providing guidelines for the development of recycling industry in the country. China also announced in 2017 a national plan for promoting extended producer responsibility (EPR) for key products, including electronics. The Chinese government plans to complete the relevant regulations of the EPR system, focusing on increasing the use of renewable materials in electronic products by 20% and reach a 50% recycling rate of e-waste by 2025. Similarly, the US government’s National Strategy for Electronics Stewardship aims to enhance electronics management throughout the product life cycle by promoting the design and manufacture of sustainable electronics built for reuse and recycling, increasing safe, effective management and handling of used electronics, encouraging electronics manufacturers to expand their product take-back programmes using certified recyclers, among other initiatives.

Based on the above, Sustainalytics believes that Lenovo’s investments in end-of-life product management and advancing the use of recycled materials, products and components are expected to contribute to improving use of resources in its electronic products and contribute to efforts on these issues in the US and China.

Alignment with/contribution to SDGs

The Sustainable Development Goals were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by the year 2030. The instruments issued under the Lenovo Group Limited Green Finance Framework are expected to help advance the following SDGs and targets:

<table>
<thead>
<tr>
<th>Use of Proceeds Category</th>
<th>SDG</th>
<th>SDG target</th>
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<td>Energy Efficiency</td>
<td>7. Affordable and Clean Energy</td>
<td>7.3 By 2030, double the global rate of improvement in energy efficiency</td>
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<tr>
<td></td>
<td>9. Industry, Innovation and Infrastructure</td>
<td>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</td>
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62 Ibid.
65 Ibid.
Renewable Energy

7. Affordable and Clean Energy

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

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

Circular Economy

12. Responsible Consumption and Production

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

Clean Transportation

11. Sustainable Cities and Communities

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Conclusion

Lenovo has developed the Lenovo Group Limited Green Finance Framework, under which it may issue green bonds and obtain loans and use the proceeds to finance energy efficiency, renewable energy, green buildings, use of recycled materials, improvements in product recyclability and clean transportation. Sustainalytics considers that the projects eventually funded by the instrument’s proceeds are expected to improve Lenovo’s environmental performance.

The Lenovo Group Limited Green Finance Framework outlines a process for tracking, allocating and managing proceeds, and makes commitments for Lenovo to report on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the Lenovo Group Limited Green Finance Framework is aligned with the overall sustainability strategy of the Company and that the use of proceeds is expected to contribute to the advancement of the UN Sustainable Development Goals 7, 9, 11 and 12. Additionally, Sustainalytics is of the opinion that Lenovo has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the proceeds.

Based on the above, Sustainalytics is confident that Lenovo Group Limited is well positioned to issue green bonds and that the Lenovo Group Limited Green Finance Framework is robust, transparent and in alignment with the four core components of the Green Bond Principles (2021) and Green Loan Principles (2021).
Appendix

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

Section 1. Basic Information

<table>
<thead>
<tr>
<th>Issuer name:</th>
<th>Lenovo Group Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:</td>
<td>Lenovo Group Limited Green Finance Framework</td>
</tr>
<tr>
<td>Review provider’s name:</td>
<td>Sustainalytics</td>
</tr>
<tr>
<td>Completion date of this form:</td>
<td>July 08, 2022</td>
</tr>
<tr>
<td>Publication date of review publication:</td>
<td>October 15, 2021</td>
</tr>
<tr>
<td>Original publication date:</td>
<td></td>
</tr>
</tbody>
</table>

Section 2. Review overview

SCOPE OF REVIEW
The following may be used or adapted, where appropriate, to summarise the scope of the review.
The review assessed the following elements and confirmed their alignment with the GBP:

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

ROLE(S) OF REVIEW PROVIDER

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

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

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

Please refer to Evaluation Summary above.
Section 3. Detailed review

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

1. USE OF PROCEEDS

Overall comment on section (if applicable):

The eligible categories for the use of proceeds- Energy Efficiency, Renewable Energy, Green Buildings, Circular Economy Adapted Products, Production and Processes, and Clean Transportation- are aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDG 7, 9, 11 and 12.

Use of proceeds categories as per GBP:

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

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

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

Lenovo Group Limited’s Green Financing Working Group (GFWG) will review and approve eligible projects. The GFWG is comprised of senior representatives from the Company’s Finance, Treasury, Legal, ESG, Real Estate and Global Supply Chain departments. Lenovo’s requirements and management mechanisms regarding occupational health and safety, environmental issues and business ethics, including environmental and social assessments, are applicable to all allocation decisions made under the Framework. Sustainalytics views these risk management systems as adequate and considers the project selection process to be in line with market practice.
### Evaluation and selection

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

### Information on Responsibilities and Accountability

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

### 3. MANAGEMENT OF PROCEEDS

**Overall comment on section (if applicable):**

Lenovo Group Limited’s Finance Department will be responsible for managing proceeds and tracking their allocation using an internal management system overseen by the GFWG. Pending allocation, net proceeds will be temporarily held in cash, cash equivalents or deposits, subject to exclusion criteria. Full allocation is intended within 24 months from issuance. This is in line with market practice.

| ☒ 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):

Lenovo Group Limited intends to publish on its website both allocation and impact reporting on an annual basis until full allocation. Allocation reporting will include the allocation amount per eligible project category and geography, proportion between financing and refinancing, project examples, as well as the amount of unallocated proceeds and its temporary treatment. In addition, Lenovo is committed to reporting on relevant impact indicators. Sustainalytics views Lenovo’s allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

☐ Project-by-project  ☒ On a project portfolio basis

☐ Linkage to individual bond(s)  ☐ Other (please specify):

Information reported:

☒ Allocated amounts  ☐ Green Bond financed share of total investment

☒ Other (please specify): amount of unallocated proceeds and its temporary treatment, allocation amount by geography, proportion between financing and refinancing, project examples

Frequency:

☒ Annual  ☐ Semi-annual

☐ Other (please specify):

Impact reporting:

☐ Project-by-project  ☒ On a project portfolio basis

☐ Linkage to individual bond(s)  ☐ Other (please specify):

Information reported (expected or ex-post):

☒ GHG Emissions / Savings  ☒ Energy Savings

☐ Decrease in water use  ☒ Other ESG indicators (please specify):

energy conservation (MWh or GJ), GHG emissions reduction/prevented (tonnes of CO2 equivalent)

renewable energy generation (MWh or GJ) annually and GHG
Second-Party Opinion
Lenovo Group Limited Green Finance Framework

- Emissions reduced (tonnes of CO2 equivalent)
- Number of green buildings constructed/renovated, Area of green buildings built (square feet or square meters)
- Waste reduced/prevented annually, number of circular economy materials/components/products designed or introduced
- Number and type of clean transportation assets acquired and amount of GHG emissions reduced/avoided (tonnes of CO2 equivalent)

**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): Allocation and Impact Report published on Company website
- ☐ 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:**
- ☐ Consultancy (incl. 2nd opinion)
- ☐ Certification
- ☐ Verification / Audit
- ☐ Rating
- ☐ Other (please specify):

**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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In case of discrepancies between the English language and translated versions, the English language version shall prevail.
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For more information, visit [www.sustainalytics.com](http://www.sustainalytics.com)

Or contact us [contact@sustainalytics.com](mailto:contact@sustainalytics.com)