Second-Party Opinion

NBN Co Sustainability Bond Framework



Evaluation Summary

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



USE OF PROCEEDS The eligible categories for the use of proceeds – Energy Efficiency, Renewable Energy, and Access to Essential Services and Socioeconomic Advancement and Empowerment – are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental and social impacts and advance the UN Sustainable Development Goals, specifically SDGs 7 and 9.



PROJECT EVALUATION / SELECTION NBN Co's internal process for evaluating and selecting projects is managed by its Sustainability Bond Advisory Group. NBN Co has established internal policies and a risk management standard to support the management of environmental and social risks associated with the projects and assets financed, which are applicable to all allocation decisions made under the Sustainability Bond Framework. Sustainalytics considers these risk management systems to be adequate and the project selection process to be in line with market practice.



MANAGEMENT OF PROCEEDS NBN Co's Sustainability Bond Advisory Group will oversee the process of validating and monitoring the allocation of net proceeds to eligible projects. NBN Co intends to allocate net proceeds to eligible projects within two years from issuance. Pending allocation, unallocated proceeds will temporarily be held in cash or cash equivalents. This is in line with market practice.



REPORTING NBN Co intends to report on allocation of proceeds in its Sustainability Bond Report on an annual basis until the maturity date of the bonds. Allocation reporting will include a list of all bonds issued during the reporting period, the number of bonds outstanding on the reporting date, a summary of the terms of each transaction, the balance of unallocated net proceeds, as well as additional information from NBN Co's Sustainable Bonds Register. In addition, NBN Co is committed to reporting on relevant impact metrics. Sustainalytics views NBN Co's allocation and impact reporting as aligned with market practice.

Evaluation date	February 16, 2022
Issuer Location	Sydney, Australia

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Introduction

NBN Co Limited ("NBN Co" or the "Company") is a government business enterprise wholly owned by the Commonwealth of Australia. NBN Co was established in 2009 to design, build and operate Australia's wholesale broadband access network. As of 31 December 2021, the Company served 8.4 million premises and had approximately 4,800 employees. 1.2 In FY 2021, the Company generated AUD 4.6 billion (USD 3.33 billion) in revenue. 3

NBN Co has developed the NBN Co Sustainability Bond Framework (the "Framework") under which it intends to issue green, social and sustainability bonds, and use the proceeds to finance and refinance, in whole or in part, existing and future projects that are expected to reduce the carbon footprint of the Company's business activities and enable digital inclusion providing social benefits in Australia.

The Framework defines eligibility criteria in two green areas:

- 1. Energy Efficiency
- 2. Renewable Energy

The Framework defines eligibility criteria in one social area:

1. Access to Essential Services and Socio-economic Advancement and Empowerment

NBN engaged Sustainalytics to review the NBN Co Sustainability Bond Framework version 1.0, dated February 2022, and provide a Second-Party Opinion on the Framework's environmental and social credentials, and its alignment with the Sustainability Bond Guidelines 2021 (SBG), Green Bond Principles 2021 (GBP) and Social Bond Principles 2021 (SBP) administered by the International Capital Market Association (ICMA).⁴ The Framework is published in a separate document.⁵

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

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent⁶ 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 SBG 2021, GBP 2021, and SBP 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

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

As part of this engagement, Sustainalytics held conversations with various members of NBN Co's management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the Framework. NBN Co representatives have confirmed (1) they understand it is the sole responsibility of NBN Co to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

¹ NBN Co, "20 Jan 2022 Weekly Progress Report", at: https://www.nbnco.com.au/content/dam/nbnco2/2019/documents/weekly-progress-report/Public_Progress_data%20-%2020012022.pdf

² NBN Co, "2022 Half-Year Report", at: https://www.nbnco.com.au/content/dam/nbn/documents/media-centre/media-statements/2022/nbn-co-2022-half-year-report.pdf

³ NBN Co, "2021 Annual Report", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/financial-reports/nbn-co-annual-report-2021.pdf

⁴ The Sustainability Bond Guidelines, Green Bond Principles, and Social Bond Principles are administered by the International Capital Market Association and are available at https://www.icmagroup.org/green-social-and-sustainability-bonds/sustainability-bond-guidelines-sbg/.

⁵ The NBN Co Sustainability Bond Framework is available on NBN Co's website at: <u>www.nbnco.com.au/debt-investor</u>.

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.



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 NBN Co.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner. The Second-Party Opinion is valid for issuances aligned with the respective Framework for which the Second-Party Opinion was written for a period of twenty-four (24) months from the evaluation date stated herein.

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

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

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the NBN Co Sustainability Bond Framework

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

- Use of Proceeds:
 - The eligible categories Energy Efficiency, Renewable Energy, and Access to Essential Services and Socio-economic Advancement and Empowerment are aligned with those recognized by the GBP and SBP. Sustainalytics notes that the projects funded under the Framework are expected to reduce the carbon footprint of the Company's business activities and enable digital inclusion providing social benefits in Australia.
 - NBN Co has established a three-year look-back period for its refinancing activities and intends to complete the full allocation of proceeds within two years after issuance. Sustainalytics views this to be in line with market practice.
 - Under the Energy Efficiency category, NBN Co may finance network technologies and activities to increase the energy efficiency ⁷ of its network and associated infrastructure. Network development projects may include the deployment of fixed-line fibre-optic connections to replace copper-based networks, including fibre to the premise (FTTP), fibre to the building (FTTB), fibre to the node (FTTN), fibre to the curb (FTTC), hybrid fibre coaxial (HFC) and transit network infrastructure (TNI). Sustainalytics considers investments in fibre-optic networks that lead to energy efficiency gains to be in line with market practice.
 - In the Renewable Energy category, the Company may finance renewable energy generation projects through long-term (>5 years) power purchase agreements with wind, solar, and battery storage technologies that are directly connected to renewable energy. Sustainalytics considers the criteria for purchasing renewable energy to be aligned with market practice.
 - Under the Access to Essential Services and Socio-economic Advancement and Empowerment category, the Company may finance projects that are aimed at enabling digital inclusion and

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⁷ Measured by the amount of energy consumed per gigabyte of data (kWh/GB) when compared to copper-based networks.



advancing digital skills and abilities for underserved regional and remote communities. 8,9 The Company has confirmed to Sustainalytics that expenditures on providing access to NBN Co network services will be aimed toward underserved regional and remote communities that have historically had no or limited access to adequate broadband services. Projects may include network infrastructure, facilities, technologies and solutions such as fixed wireless and Sky Muster Satellite. Sustainalytics considers the expenditures to be aligned with market practice.

 Sustainalytics notes that the Framework has the following exclusion criterion: projects or activities relevant to weapons, gambling, tobacco and fossil fuel production. Sustainalytics is of the opinion that the addition of exclusionary criteria strengthens the Framework.

Project Evaluation and Selection:

- NBN Co's Sustainability Bond Advisory Group will be responsible for evaluating and selecting eligible projects. The Company's Financing Committee, a sub-committee of its board of directors, will review and provide final approval for proposed projects that comply with the Framework's eligibility criteria.
- The Company has established internal policies and a risk management standard in accordance with ISO 31000 Risk Management Guidelines to support the management of environmental and social risks associated with assets and projects financed under the Framework. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectation. For additional details, see Section 2.
- Based on these elements, Sustainalytics considers this process to be in line with market practice.

Management of Proceeds:

- The Sustainability Bond Advisory Group will oversee the process of validating and monitoring the allocation of net proceeds to eligible assets and projects. The Company will track the allocation of net proceeds to eligible assets and projects through its Sustainable Bond Register. The Sustainability Bond Advisory Group will review the register annually to account for any reallocations, repayments or withdrawals on the eligible projects.
- The Company intends to allocate net proceeds to eligible projects within two years of issuance.
 Pending allocation, unallocated proceeds will be held temporarily in cash or cash equivalents.
- Based on the established tracking system and disclosure of temporary use of proceeds,
 Sustainalytics considers these processes to be in line with market practice.

Reporting:

- NBN Co intends to report on the allocation and impact of proceeds in its Sustainability Bond Report on an annual basis, until the maturity date of the bonds. The report will be made publicly available on NBN Co's website. Allocation reporting will include a list of all bonds issued during the reporting period, the number of bonds outstanding on the reporting date, a summary of the terms of each transaction, the balance of unallocated net proceeds, as well as additional information in NBN Co's Sustainable Bonds Register.
- In addition, the Company is committed to reporting on relevant impact metrics, subject to availability. Impact metrics may include information such as improvement in energy intensity, reduction in CO₂ emissions, as well as reduction in unconnected people by target group. For a complete list of potential impact indicators, please refer to Appendix 1.
- Based on the commitment to allocation and impact reporting, Sustainalytics considers this
 process to be in line with market practice.

Alignment with Sustainability Bond Guidelines 2021

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

⁸ The Company has defined underserved regional and remote communities as people living in regional and remote parts of Australia which have a low take-up of broadband services. Communities with low take-up are defined as those with limited NBN network service penetration, as measured by the number of premises ready to connect compared to the total number of premises connected to an NBN network service, and where mobile and legacy broadband services are reported to be substandard.

⁹ Regional Australia includes all towns, small cities and areas that lie beyond the major capital cities (Sidney, Melbourne, Brisbane, Perth, Adelaide and Canberra), according to the Regional Australia Institute, at: http://www.regionalaustralia.org.au/home/what-is-regional-australia/.



Section 2: Sustainability Performance of NBN Co

Contribution of Framework to NBN Co's sustainability strategy

Sustainalytics is of the opinion that NBN Co demonstrates a commitment to sustainability by incorporating environmental and social considerations into its business operations through the following: (i) its objective of enhancing the digital capability of all Australians, (ii) the establishment of a value creation model that creates sustainable value for all of its stakeholders, and (iii) the implementation of a company-wide Sustainability Program.¹⁰

NBN Co's company-wide Sustainability Program focuses on six material topics; social equity, economic contribution, resilient network, climate action, diversity and inclusion, and transparent and accountable business.¹¹ The Company announced the Towards-Zero Carbon Ambition, under which by December 2025 the Company aims to achieve a 25 GWh per year reduction in energy consumption across the Company's network and facilities.¹² To reduce energy consumption, the Company has: (i) turned off more than 17,000 inactive line cards in its network with the potential to reduce 2 GWh of electricity use per year, and (ii) installed more than 1,000 LED lights across transit aggregation nodes and depots.¹³ As part of its RE100 membership, NBN Co has committed to source 100% of its electricity from renewable sources by December 2025.^{14,15} The Company plans to focus on climate resilience areas, which are also included in its 2022 Corporate Plan and 2021 Sustainability Report: (i) to introduce a network health scorecard to measure resilience and recovery, and (ii) to develop real-time monitoring for key network break points to help prevent or limit network disruptions.¹⁶

NBN Co aims to work with industry, governments, regulators and communities to enhance Australia's digital capability. The Company has allocated AUD 4.5 billion (USD 3.26 billion) to expand the reach and capacity of its network to improve digital inclusion across Australia. Between FY 2022 and FY 2025, the Company intends to connect remaining complex installations, including difficult-to-reach homes and businesses, heritage sites and culturally significant regions, to further support digital inclusion and capability.

Sustainalytics is of the opinion that the NBN Co Sustainability Bond Framework is aligned with the Company's overall sustainability strategy and initiatives and will further the Company's action on its key environmental and social 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 associated with the eligible projects could include waste, land use and biodiversity issues associated with network infrastructure, optical network security risks, occupational health and safety, and increasing social inequalities in the case of inadequate digital inclusion.

Sustainalytics is of the opinion that NBN Co is able to manage and mitigate potential risks through implementation of the following:

NBN Co has a Health, Safety and Environmental (HSE) Management System in place that complies
with the requirements of ISO 14001:2015 ²⁰ for its design, project management of broadband roll-

¹⁰ NBN Co, "Sustainability Report 2021", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/nbn-sustainability-report-2021.pdf

¹¹ NBN Co, "Sustainability Report 2021", at: <a href="https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/sustainabili

¹² Ibid.

¹³ The NBN aggregation nodes and depots provide a point of interconnect for wholesale and retail network service providers to deliver high-speed broadband network to a range of locations. ITNews, "NBN cuts energy used by aggregation, FTTN nodes", at: https://www.itnews.com.au/news/nbn-cocuts-energy-used-by-pois-fttn-nodes-474588.

NBN Co, "NBN Co announces 100% Renewable Electricity target and Towards Zero Carbon ambition", at: https://www.nbnco.com.au/corporate-information/media-centre/media-statements/nbn-co-announces-100-percent-renewable-electricity-target-and-towards-zero-carbon-ambition
 RE 100, at: https://www.there100.org/

¹⁶ NBN Co, "2022 Corporate Plan", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/corporate-plan/nbn-co-corporate-plan-2022.pdf

¹⁷ NBN Co, "2021 Annual Report", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/financial-reports/nbn-co-annual-report-2021.pdf

¹⁸ Ibid.

¹⁹ NBN Co, "Sustainability Report 2021", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/nbn-sustainability-report-2021.pdf

²⁰ ISO, "Environmental management systems — Requirements with guidance for use", at: https://www.iso.org/standard/60857.html



out, operations and maintenance of communications infrastructure.²¹ In addition, the Company has introduced an Environment Handbook outlining the controls and practices that help identify and manage environmental risks, such as waste, land use and biodiversity issues associated with network infrastructure.²² As per the Handbook, the Company evaluates the Constraints and Access report to identify potential negative impacts of the projects, as well as permit requirements or specified controls pertaining to the work site area. The Handbook also includes waste management, vegetation, wildlife, and soil preservation, outlining the processes and controls required at each stage, from network planning, design and construction to operation and maintenance.

- To ensure the security of optical networks, NBN Co has developed its own Network Design Rules for the design, engineering and construction of assets to provide and maintain quality, reliability and security.²³ In addition, the Company has a Security Policy in place that requires the Company to establish a security management system responsible for preventing, detecting, responding to, and recovering from security threats and incidents in a timely and coordinated manner.²⁴ The Company has implemented various physical security controls to safeguard its sites, including a dedicated security incident response center that provides round-the-clock monitoring and response measures for assets located throughout Australia.²⁵
- To ensure worker health and safety, NBN Co has a HSE policy in place that requires the Company to identify health and safety risks, develop and implement controls, and assess their effectiveness through assurance and performance indicators. ²⁶ The policy incorporates HSE considerations into the Company's network infrastructure, plant, equipment and facilities' planning, design, procurement, construction, operation, maintenance and disposal. ²⁷
- To mitigate the risk of exacerbating social inequalities in digital inclusion, NBN Co engages with stakeholders to address digital inclusion and capability barriers for underrepresented stakeholders, including low-income families, senior citizens, First Peoples and residents of rural and remote locations. ²⁸ In 2019, the Company established a Regional Development and Engagement team, supported by a dedicated local engagement team comprised of community members. ²⁹ Through focused programmes, the Regional Development and Engagement team undertakes outreach activities for regional Australians.

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

Importance of energy-efficient technology in the telecom sector

As of 2021, the ICT sector as a whole contributed 3-4% of global GHG emissions, with the telecom sector accounting for 1.6%. ³⁰ Increasing global data use and advancements in technology require additional infrastructure from telecom companies, generating more emissions. The introduction of 5G alone could result in the sector consuming up to 2-3 times more energy than in 2019³¹ and account for 14% of global GHG

²¹ NBN Co, "Sustainability Report 2021", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/nbn-sustainability-report-2021.pdf

²² NBN Co's Environment handbook on health, safety and environment has been shared with Sustainalytics and reviewed confidentially.

²³ NBN Co, "Network Design Rules", at: https://www.nbnco.com.au/content/dam/nbn/documents/sell/sau/network-design-rules-20210630.pdf

²⁴ NBN Co's Security Policy has been shared with Sustainalytics and reviewed confidentially.

²⁵ NBN Co, "Sustainability Report 2021", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/nbn-sustainability-report-2021.pdf

²⁶ NBN Co, "Sustainability Report 2021", at: <a href="https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/sustainabili

²⁷ NBN Co, Environment handbook on health, safety and environment has been shared with Sustainalytics and reviewed confidentially.

²⁸ NBN Co, "Sustainability Report 2021", at: https://www.nbnco.com.au/content/dam/nbn/documents/about-nbn/reports/sustainability-reports/nbn-sustainability-report-2021.pdf
²⁹ Ibid.

³⁰ BCG, "Telco Sector Can Be Game-Changer on Sustainability",(2021), at: https://www.bcg.com/press/24june2021-telco-sector-game-changer-sustainability-shrinking-carbon-footprints

³¹ GSMA Future Networks, "Energy Efficiency: An Overview", (2019), at: https://www.gsma.com/futurenetworks/wiki/energy-efficiency-2/



emissions by 2040.³² As most emissions of the telecom sector come from energy consumption, energy efficiency measures may reduce energy-related GHG emissions by 40% over the next two decades. ³³ Reducing the energy demand per unit of data traffic in the ICT sector, for example, could eliminate up to an estimated 15% of all global emissions by 2030.³⁴

In Australia, the telecom and IT sector consumed approximately 4% of the country's electricity in 2019-20. Between 2018 and 2020, the energy-related GHG emissions from this sector increased by 2.5%. As of 2020, the telecom and IT sector accounted for 0.77% of Australia's total GHG emissions, 36.37 while every 1% rise in ICT development results in a 0.66% increase in GHG emissions in Australia, according to a University of Southern Queensland study. Technologies that use fibre-optics have the ability to significantly reduce the sector's energy consumption and are considered to be one of the most energy-efficient means of broadband access. Compared to copper cables, fibre-optics consumes less than one-fifth of energy per user. In order to accelerate the low-carbon transition, Australia committed to reduce its GHG emissions by 26%-28% by 2030 and achieve carbon neutrality by 2050 under the Paris Agreement.

Sustainalytics is of the opinion that NBN Co's investment in energy-efficient network technologies such as FTTP, FTTN, FTTB, FTTC and HFC which use fibre-optics, are expected to help in reducing GHG emissions from the telecom sector and contribute to Australia meeting its emissions reduction targets.

Importance of digital inclusion in Australia

As per the Australian Digital Inclusion Index, one out of four people in Australia were digitally excluded in 2021.⁴² The pandemic has particularly increased the risk of digital exclusion for vulnerable communities like First Nations people, those with low levels of income and education, people living in remote and regional areas, elderly people aged over 65, new migrants and refugees, and people with disabilities.⁴³ According to the Digital Nation Australia, only one-third of Australia's land area has mobile connectivity, and about 30% of people in remote First Nations communities have no household internet or phone. Additionally, the report indicates that First Nations people are more likely to lack the digital ability and skills necessary to use digital technologies.^{44,45} Moreover, affordability and access to network infrastructure are key challenges for low-income households.⁴⁶

The government of Australia has rolled out initiatives such as the Universal Service Guarantee to enable access to fast, affordable broadband throughout the country, and the Mobile Black Spot Program to improve mobile network coverage.⁴⁷ In addition, the Australian Digital Inclusion Alliance (ADIA) has put forward a National Digital Inclusion Roadmap in 2020 aimed at ensuring affordability and accessibility, as well as enhancing digital skills among communities at risk of exclusion.⁴⁸

³² BCG, "Telco Sector Can Be Game-Changer on Sustainability",(2021), at: https://www.bcg.com/press/24june2021-telco-sector-game-changer-sustainability-shrinking-carbon-footprints

³³ International Energy Association, "Energy Efficiency 2020", at: https://iea.blob.core.windows.net/assets/59268647-0b70-4e7b-9f78-269e5ee93f26/Energy_Efficiency_2020.pdf

³⁵ Greenpeace, "Reenergise: Solar Streaming: Who's leading the telco, tech & IT race to renewables?", (2021), at: https://reenergise.org/wp-content/uploads/2021/06/GPAP-RE-Telco-Briefer.pdf

³⁷ IEA, "Australia: Country Profile", (2020), at: https://www.iea.org/countries/australia

³⁸ Khanal, A. (2021), "The Role of ICT and Energy Consumption on Carbon Emissions: An Australian Evidence Using Cointegration Test and ARDL Longrun and Short-run Methodology", International Journal of Energy Economics and Policy, at: https://eprints.usq.edu.au/43426/1/The%20Role%20of%20ICT%20and%20Energy%20Consumption%20on%20Carbon%20emissions.pdf

³⁹ TalkTalk Business, "Full Fibre Most Energy-Efficient Connectivity Method", at: https://www.talktalkbusiness.co.uk/news-and-insight/blogs/fttp-ftw-new-research-full-fibre-most-energy-efficient-connectivity-method/

⁴⁰ Multicom, "Copper v/s Fibre – Which to choose?", at: https://www.multicominc.com/training/technical-resources/copper-vs-fiber-which-to-choose/

⁴¹ Australian Government Department of Industry, Science, Energy and Resources, "International Climate Change Commitments", at: https://www.industry.gov.au/policies-and-initiatives/international-climate-change-commitments

⁴² Good Things Foundation Australia, "The Digital Divide", (2021), at: https://www.goodthingsfoundation.org.au/the-digital-divide/

⁴³ Good Things Foundation Australia, "Digital Nation Australia 2021", (2021), at: https://www.goodthingsfoundation.org.au/news/digital-nation-australia-2021/

⁴⁴ Ibid.

⁴⁵ ADIA, "A National Digital Inclusion Roadmap", (2020), at: https://www.digitalinclusion.org.au/wp-content/uploads/2020/10/ADIA-A-National-Digital-Inclusion-Roadmap.pdf

⁴⁷ Australian Government Department of Industry, Science, Energy and Resources, "What is government doing to improve inclusion?" at: https://www.industry.gov.au/data-and-publications/australias-tech-future/inclusion/what-is-the-government-doing-to-improve-inclusion

⁴⁸ ÅDIA, "A National Digital Inclusion Roadmap", (2020), at: https://www.digitalinclusion.org.au/wp-content/uploads/2020/10/ADIA-A-National-Digital-Inclusion-Roadmap.pdf



Sustainalytics is of the opinion that NBN Co's initiatives to expand the broadband network to the underserved regional and remote communities will enable digital inclusion in Australia.

Alignment with/contribution to SDGs

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

Use of Proceeds Category	SDG	SDG target
Energy Efficiency	9. Industry, innovation and infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Renewable Energy	7. Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Access to Essential Services and Socio- economic Advancement and Empowerment	9. Industry, innovation and infrastructure	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

Conclusion

NBN Co has developed the Sustainability Bond Framework under which it may issue green bonds, social bonds and sustainability bonds and use the proceeds to finance or refinance projects related to energy efficiency, renewable energy, and access to essential services and socioeconomic advancement and empowerment. Sustainalytics considers that the projects funded by the sustainability bond proceeds are expected to reduce the carbon footprint of the Company's business activities and enable digital inclusion providing social benefits in Australia.

The Sustainability Bond Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that Sustainability Bond Framework is aligned with the overall sustainability strategy of the Company and that the use of proceeds categories will contribute to the advancement of the UN SDGs 7 and 9. Additionally, Sustainalytics is of the opinion that NBN Co 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 NBN Co is well-positioned to issue green bonds, social bonds and sustainability bonds and that that Sustainability Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles (2021) and Social Bond Principles (2021).



Appendix

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

Section 1. Basic Information

Issu	er name:	Co Limited			
	ainability Bond ISIN or Issuer Sustainability d Framework Name, if applicable:	NBN C	NBN Co Sustainability Bond Framework		
Revi	ew provider's name:	Sustai	inalytics		
Com	pletion date of this form:	Februa	ary 16, 2022		
Publ	lication date of review publication:				
Sect	ion 2. Review overview				
SCOP	E OF REVIEW				
The fo	ollowing may be used or adapted, where approp	riate, to	summarise the scope of the review.		
The re	eview assessed the following elements and con-	firmed th	neir alignment with the GBP and SBP:		
\boxtimes	Use of Proceeds	×	Process for Project Evaluation and Selection		
\boxtimes	Management of Proceeds	\boxtimes	Reporting		
ROLE((S) OF REVIEW PROVIDER				
\boxtimes	Consultancy (incl. 2 nd opinion)		Certification		
	Verification		Rating		
	Other (please specify):				
	Note: In case of multiple reviews / different p	roviders,	, please provide separate forms for each review.		
EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)					
Please	e 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, and Access to Essential Services and Socioeconomic Advancement and Empowerment – are aligned with those recognized by both the Green Bond Principles and Social Bond Principles. Sustainalytics considers that investments in the eligible categories are expected to lead to positive environmental and social impacts and advance the UN Sustainable Development Goals, specifically SDGs 7 and 9.

Use	of proceeds categories as per GBP:					
\boxtimes	Renewable energy	\boxtimes	Energy efficiency			
	Pollution prevention and control		Environmentally sustainable management of living natural resources and land use			
	Terrestrial and aquatic biodiversity conservation		Clean transportation			
	Sustainable water and wastewater management		Climate change adaptation			
	Eco-efficient and/or circular economy adapted products, production technologies and processes		Green buildings			
	Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs		Other (please specify):			
If applicable please specify the environmental taxonomy, if other than GBPs:						
Use	of proceeds categories as per SBP:					
	Affordable basic infrastructure		Access to essential services			
	Affordable housing		Employment generation (through SME financing and microfinance)			
	Food security		Socio-economic advancement and empowerment			
	Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBP	×	Other (please specify): Access to Essential Services and Socioeconomic Advancement and Empowerment			

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



2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

NBN Co's internal process for evaluating and selecting projects is managed by its Sustainability Bond Advisory Group. NBN Co has established internal policies and a risk management standard to support the management of environmental and social risks associated with the projects and assets financed, which are applicable to all allocation decisions made under the Sustainability Bond Framework. Sustainalytics considers these risk management systems to be adequate and the project selection process to be in line with market practice.

Eval	luation and selection		
\boxtimes	Credentials on the issuer's social and green objectives	\boxtimes	Documented process to determine that projects fit within defined categories
	Defined and transparent criteria for projects eligible for Sustainability Bond proceeds		Documented process to identify and manage potential ESG risks associated with the project
×	Summary criteria for project evaluation and selection publicly available		Other (please specify):
Info	rmation on Responsibilities and Accountability	,	
\boxtimes	Evaluation / Selection criteria subject to external advice or verification		In-house assessment
	Other (please specify):		
3. N	IANAGEMENT OF PROCEEDS		
Ove	rall comment on section (if applicable):		
allo with	cation of net proceeds to eligible projects. NBI	N Co n, una	ersee the process of validating and monitoring the intends to allocate net proceeds to eligible projects allocated proceeds will temporarily be held in cash or
Trac	cking of proceeds:		
\boxtimes	Sustainability Bond proceeds segregated or tr manner	acke	d by the issuer in an appropriate
\boxtimes	Disclosure of intended types of temporary inventoreds	estm	ent instruments for unallocated
	Other (please specify):		
Add	itional disclosure:		
	Allocations to future investments only	\boxtimes	Allocations to both existing and future investments

NBN Co Sustainability Bond Framework



	Allocation t	o ind	ividual disbursements		Allocation to a portfolio of disbursements		
\boxtimes	Disclosure unallocated		rtfolio balance of ceeds		Other (please specify):		
4. R	EPORTING						
Ove	rall commen	t on s	section (if applicable):				
the peri the Reg	maturity date od, the numb balance of ur ister. In addit	e of ti er of nalloo tion, I	he bonds. Allocation reporting bonds outstanding on the recated net proceeds, as well a	ng wil eport as ado orting	nits Sustainability Bond Report on an annual basis unti ill include a list of all bonds issued during the reporting rting date, a summary of the terms of each transaction dditional information from NBN Co's Sustainable Bonds g on relevant impact metrics. Sustainalytics views NBN narket practice.		
Use	of proceeds	repo	orting:				
	Project-by-	-proje	ect	\boxtimes	On a project portfolio basis		
	Linkage to	indiv	ridual bond(s)		Other (please specify):		
	Information reported:						
			Allocated amounts		 Sustainability Bond financed share of total investment 		
			Other (please specify): a lall bonds issued during the reporting period, the numbonds outstanding on the reporting date, a summar terms of each transaction balance of unallocated ne proceeds, as well as addinformation from NBN Co Sustainable Bonds Register	ne ber o e y of the et et tional	of the		
	Frequency:						
		\boxtimes	Annual		☐ Semi-annual		
			Other (please specify):				
lmp	act reporting	j:					
	Project-by-	proje	ect	\boxtimes	On a project portfolio basis		
	Linkage to	indiv	idual bond(s)		Other (please specify):		
		Info	ormation reported (expected	d or e	ex-post):		
		\square	GHG Emissions / Savings		☐ Energy Savings		

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		Decrease in water use		\boxtimes	Number of beneficiaries		
		Target populations			Other ESG indicators (please specify): improvement in energy intensity, annual renewable energy generation in mwh, additional capacity of renewable energy plant(s) constructed or contracted in mwh.		
	Fre	equency:					
	\boxtimes	Annual			Semi-annual		
		Other (please specify):					
Mea	ns of Disclosure						
	Information pul	olished in financial report		Informat report	tion published in sustainability		
	Information published in ad hoc documents				Other (please specify): Sustainability Bond Report		
Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):							
		lease specify name and date			n the useful links section. als, to issuer's documentation, etc.)		
	s://www.nbnco.c						
wwv	v.nbnco.com.au/	<u>debt-investor</u>	-nbn-c	co/corpora	ate-plan/sustainability-reports		
		ERNAL REVIEWS AVAILABL		-			
Туре	e(s) of Review pr	ovided:					
	Consultancy (inc	cl. 2 nd opinion)		Certificat	ion		
	Verification / Au	dit		Rating			
	Other (please sp	ecify):					
Re	view provide	r(s):	Dat	te of pu	blication:		

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

. Second-Party Opinion: An institution with sustainability expertise that is independent from the issuer may provide a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Sustainability Bond framework, or appropriate procedures such as information barriers will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Principles. In particular, it can include an assessment of the issuer's

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- overarching objectives, strategy, policy, and/or processes relating to sustainability and an evaluation of the environmental and social features of the type of Projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or sustainability criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally or socially sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Sustainability Bond proceeds, statement of environmental or social impact or alignment of reporting with the Principles may also be termed verification.
- iii. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against a recognised external sustainability standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Green, Social and Sustainability Bond Scoring/Rating: An issuer can have its Sustainability Bond, associated Sustainability Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental and/or social performance data, process relative to the Principles, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material sustainability risks.



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