

Second-Party Opinion Singapore Telecommunications Limited ("Singtel Group") Sustainability-Linked Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the Singapore Telecommunications Limited Group ("Singtel Group") Sustainability-Linked Bond Framework aligns with the Sustainability-Linked Bond Principles 2020. This assessment is based on the following:

- Selection of Key Performance Indicators (KPIs)** The Singtel Group Sustainability-Linked Bond Framework includes the following KPIs: (i) Scope 1 and 2 GHG Emissions for the Singtel Group, and (ii) Scope 1 and 2 GHG Emissions for Singtel Optus Pty Limited (Optus), a wholly owned subsidiary of Singtel Group – "Issuers" herein refers to Optus and the Singtel Group jointly. Sustainalytics considers the KPIs to be strong based on their materiality, their scope of applicability, their relevance to the Issuers' businesses, and their ability to be benchmarked.
- Calibration of Sustainability Performance Targets (SPTs)** Sustainalytics considers the SPTs to be aligned with the Issuers' sustainability strategies. Sustainalytics notes that the SPTs: i) go beyond business as usual, ii) align with industry peers' targets, and iii) align with the well-below 2°C climate scenario.
- Bond Characteristics** The Issuers will link the bonds' financial structure to achievement of the SPTs, namely by adjusting the coupon rate or premium upon maturity when a particular SPT specified in the SLB issuance is not met by the target observation date. Sustainalytics views these characteristics positively.
- Reporting** The Issuers commit to report on their performance on the KPIs on an annual basis in the Singtel Group's Sustainability Report, which is published on the Group's website. The Issuers also commit to disclose relevant information that affect KPI performance, such as any KPI reassessments and baseline or scope adjustments, where relevant. The reporting commitments are aligned with the Sustainability-Linked Bond Principles.
- Verification** The Issuers commit to have external limited assurance conducted on their KPI performance at the communicated SPT deadline, which is aligned with market expectations.

Evaluation Date	October 08, 2021
Issuer Location	Singtel Group: Singapore Optus: Sydney, Australia

The SPTs contribute to the following SDGs:



Overview of KPIs and SPTs

KPI	Baseline	SPTs	Strength of the KPI	Ambitiousness of SPT
KPI 1: Scope 1 and 2 GHG Emissions for Singtel Group	2015	SPT 1a: Reduce Singtel Group's absolute scope 1 and 2 GHG emissions by 25% by 2025 SPT 1b: Reduce Singtel Group's absolute scope 1 and 2 GHG emissions by 42% by 2030	Strong	Ambitious
KPI 2: Scope 1 and 2 GHG Emissions for Optus	2015	SPT 2a: Reduce Optus' absolute scope 1 and 2 GHG emissions by 25% by 2025 SPT 2b: Reduce Optus' absolute Scope 1 and 2 GHG emissions by 42% by 2030	Strong	Ambitious

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Scope of Work and Limitations

Singapore Telecommunications Limited (the "Singtel Group" or "Group") has engaged Sustainalytics to review the Singtel Group Sustainability-Linked Bond Framework (the "Framework") and provide an opinion on the alignment of the bonds with the Sustainability-Linked Bond Principles 2020 (SLBP).¹

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent² opinion on the alignment of the reviewed Framework with the Sustainability-Linked Bond Principles 2020, as administered by ICMA.

As part of this engagement, Sustainalytics exchanged information with various members of Singtel Group's management team to understand the sustainability impact of its business processes and the SPTs, as well as the reporting and verification processes of aspects of the Framework. Singtel Group's representatives have confirmed that:

- (1) They understand it is the sole responsibility of the Issuers to ensure that the information provided is complete, accurate and up to date;
- (2) They have provided Sustainalytics with all relevant information; and
- (3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information. This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with the Framework. Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Singapore Telecommunications Limited. 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 the SPTs but does not measure KPI performance. The measurement and reporting of the KPIs is the responsibility of the Issuers. 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 the Singtel Group has made available to Sustainalytics for the purpose of this Second-Party Opinion.

This Second-Party Opinion is valid for issuances aligned with the Framework, considering the Framework's methodology to calculate KPI performance, up to 24 months from the Evaluation Date above or until one of the following occurs:

- (1) A material change to the external benchmarks³ against which targets were set;
- (2) A material corporate action (such as a material M&A or change in business activity) which has a bearing on the achievement of the SPTs or the materiality of a KPI.

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¹ The Sustainability-Linked Bond Principles were launched by International Capital Markets Association (ICMA) in June 2020. They are also administered by the ICMA and are available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Sustainability-Linked-Bond-PrinciplesJune-2020-100620.pdf>

² 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.

³ Benchmarks refer to science-based benchmarks.

Introduction

Singtel Group is a communications technology company providing a range of telecommunications and digital services to consumers and businesses in 21 countries across Asia, Australia, and Africa. Singtel Group’s main operations are in Singapore and Australia, where Optus, its wholly owned subsidiary, runs local operations. Headquartered in Singapore, the Group, together with its regional associates, serves more than 740 million mobile customers.

Singtel Group and Optus intend to issue sustainability-linked bonds separately under the Framework, tying the coupon rate or the premium upon maturity to achievement of sustainability performance targets for KPIs related to absolute reduction of scope 1 and 2 greenhouse gas emissions.

Singtel Group has engaged Sustainalytics to review the Framework and provide an opinion on the alignment of the Framework with the Sustainability-Linked Bond Principles 2020.

Tables 1 and 2 below define the KPIs and SPTs used by Singtel Group and Optus.

Table 1: KPI Definitions

KPI	Definition
KPI 1: Scope 1 and 2 GHG Emissions for Singtel Group ⁴	The KPIs’ metrics are absolute GHG emissions in tonnes of carbon dioxide equivalent (tCO ₂ e). Scope 1 and 2 emissions calculations follow the GHG Protocol Corporate Accounting and Reporting Standard.
KPI 2: Scope 1 and 2 GHG Emissions for Optus	Scope 1 direct emissions (CO ₂ emissions from refrigerants, fuel combustion and company fleet) are calculated using updated BEIS conversion factors ⁵ and Australia’s National Greenhouse and Energy Reporting (NGER) scheme. ⁶ Scope 2 emissions (CO ₂ emissions from electricity consumption) are calculated based on the updated simple operating margin grid emission factors from the National Environment Agency and electricity supplier emission factor in Singapore and from corresponding states in Australia.

Table 2: SPTs and Past Performance

KPI	2015 (baseline)	2018	2019	2020	2021	SPT 2025-2030
KPI 1: Scope 1 and 2 GHG Emissions for Singtel Group (thousand tCO ₂ e)	551.79	569.82	563.09	572.46	592.89	SPT 1a: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 25% by 2025
						SPT 1b: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 42% by 2030
KPI 2: Scope 1 and 2 GHG Emissions for Optus (thousand tCO ₂ e)	381.26	401.98	404.86	415.07	428.46	SPT 2a: Reduce absolute Optus’ scope 1 and 2 GHG emissions by 25% by 2025
						SPT 2b: Reduce Optus’ absolute scope 1 and 2 GHG emissions by 42% by 2030

⁴ Singtel Group’s Scope 1 and 2 emissions include Optus’ Scope 1 and 2 emissions.

⁵ Department for Business, Energy & Industrial Strategy, “UK Government GHG Conversion Factors for Company Reporting”, at: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

⁶ Clean Energy Regulator, “The NGER Scheme”, <http://www.cleanenergyregulator.gov.au/NGER>

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Alignment of the Singtel Group Sustainability-Linked Bond Framework with the Sustainability-Linked Bond Principles

Sustainalytics is of the opinion that the Singtel Group Sustainability-Linked Bond Framework aligns with the five core components of the Sustainability-Linked Bond Principles 2020.



Selection of Key Performance Indicators

Relevance and Materiality of KPIs

In its assessment of materiality and relevance, Sustainalytics considers: i) whether an indicator speaks to a material impact of the issuer's business on environmental or social issues, and ii) to what portion of impact the KPI is applicable.

Sustainalytics considers the KPIs to be material and relevant given the growing consumer demand for ICT services, which is expected to increase energy use from telecommunication companies, such as Singtel Group and Optus. This trajectory is expected to lead to higher GHG emissions from ICT providers, which represent approximately 3-4% of global carbon emissions as of 2021.⁷

Sustainalytics' ESG Risk Rating identifies "Carbon - Own Operations"⁸ as a material ESG issue for companies in the telecommunication services industry. Additionally, the Sustainability Accounting Standards Board identifies environmental footprint of operations, in particular GHG emissions, as a material sustainability issue for telecommunication companies' trusts and therefore, a relevant topic to track and disclose.⁹

In its 2020 Sustainability Report, Singtel Group details the results of its materiality assessment, which demonstrates that climate change and carbon emissions are a material and relevant issue for Singtel Group's sustainability strategy. In response to this, Singtel Group has identified among its key priorities an absolute reduction in GHG emissions to improve its sustainability performance. As a wholly owned subsidiary of Singtel Group, Optus embeds and aligns its sustainability considerations with the Group's sustainability and materiality approach.

Regarding applicability of KPI 1, Scope 1 and 2 emissions account for approximately one-third of the Group's total emissions, and about 98% of emissions from the Group's own operations.

Regarding applicability of KPI 2, scope 1 and 2 emissions account for approximately one-third of the Optus' total emissions, and about 97% of emissions from its own operations.

Sustainalytics notes that the KPIs cover a significant portion of the carbon footprint that both Issuers can control. However, the KPIs do not include scope 3 emissions, which include mostly (an estimated 95%) emissions associated with purchased goods and services, purchased capital goods and use of products sold to consumers. Singtel Group and Optus plan to prioritize the following initiatives over the next two fiscal years to reduce scope 3 emissions: (i) update Singtel Group's and Optus' scope 3 emissions inventory and baseline by end of FY 2022, (ii) update its SBTi scope 3 targets with the new baseline, (iii) closer engagement with suppliers regarding their GHG emissions, reduction targets and forecasting, (iv) collective industry-level engagement through GSMA with top common global suppliers regarding scope 3 emissions, (iv) pilot internal carbon pricing initiative for energy

⁷ BCG, "Putting Sustainability at the Top of the Telco Agenda", (2021) at: <https://www.bcg.com/en-nl/publications/2021/building-sustainable-telecommunications-companies>

⁸ The Sustainalytics' Carbon – Own Operations MEI refers to a company's management of risks related to its own operational energy use and GHG emissions (scope 1 and 2). It also includes parts of Scope 3 emissions, such as transport and logistics. It does not include emissions in the supply chain or during the use phase/end-of-life cycle of a product.

⁹ SASB, "Telecommunications Research Brief", (2014), at: https://www.sasb.org/wp-content/uploads/2019/08/SASB_Telecom_Brief.pdf

intensive capital projects to factor in the selection for energy efficiency solutions and to price in the emissions related to externalities costs, and (v) explore long-term actions, including joint renewable energy procurement or offsets.

KPI Characteristics

In assessing KPI characteristics, Sustainalytics considers: i) whether a clear and consistent methodology is used, ii) whether the issuer follows an externally recognized definition, iii) whether the KPIs are a direct measure of the issuer’s performance on the material environmental or social issue, and iv) if applicable, whether the methodology can be benchmarked to an external contextual benchmark.¹⁰

Sustainalytics considers the Issuers’ definition and methodology to calculate KPI performance to be clear and consistent based on Singtel Group and Optus following the GHG Protocol Corporate Accounting and Reporting Standard.¹¹ This approach is considered an industry standard and supports benchmarking against external emission reduction trajectories. The KPIs are also directly linked to the Issuers’ performance regarding the material climate impact.

Overall Assessment

Sustainalytics overall considers the KPIs to be strong given that they directly measure nearly all emissions that can be controlled by the Issuers, and that they can be benchmarked, in spite of not covering scope 3 emissions.

KPI 1: Scope 1 and 2 GHG Emissions for Singtel Group	Not Aligned	Adequate	Strong	Very strong
KPI 2: Scope 1 and 2 GHG Emissions for Optus				



Calibration of Sustainability Performance Targets

Alignment with Issuer’s Sustainability Strategy

Singtel Group and Optus have set the following SPTs for their KPIs:

- SPT 1a: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 25% from 2015 levels by 2025
- SPT 1b: Reduce Singtel Group absolute scope 1 and 2 GHG emissions by 42% from 2015 levels by 2030
- SPT 2a: Reduce Optus’ absolute scope 1 and 2 GHG emissions by 25% from 2015 levels by 2025
- SPT 2b: Reduce Optus’ absolute scope 1 and 2 GHG emissions by 42% from 2015 levels by 2030

Sustainalytics considers the SPTs to be aligned with Singtel Group’s sustainability strategy and notes that as a wholly owned subsidiary of the Group, Optus has its sustainability strategy integrated and aligned with the Group (please refer to Section 2 for analysis of the credibility of Singtel Group’s sustainability strategy).

As part of its sustainability strategy, Singtel Group is committed to reduce its absolute scope 1 and 2 carbon emissions by 42% and scope 3 by 30% from a 2015 baseline.¹² The Group has reported on GHG emissions for its Singapore operations since 2012 and on group-wide GHG emissions, including Optus, since 2015.¹³ In 2017, the Group received Science Based Targets initiative (SBTi) approval for its 2030 emissions reduction target, in alignment with a well-below 2°C trajectory. In 2019, the Group also committed to keeping global temperature increases within 1.5°C and net zero emissions by 2050.¹⁴ Additionally, to ensure meeting the 2030 SBTi targets and 2050 net zero ambitions, the Group has set mid-term five-year emissions reduction targets for 2025 and

¹⁰ External contextual benchmarks provide guidance on the alignment with ecological system boundaries. This criterion is not applied to social KPIs or impact areas for which such contextual benchmarks are not available.

¹¹ Greenhouse Gas Protocol, “Corporate Standard”, at: <https://ghgprotocol.org/corporate-standard>

¹² Singtel, “Singtel Group Sustainability Report 2021”, at: <https://cdn.aws.singtel.com/sustainabilityreport/2021/index.html>

¹³ Singtel, “Sustainability Reports”, at: <https://www.singtel.com/about-us/sustainability/sustainability-reports>

¹⁴ Singtel, “Singtel Group Sustainability Report 2021”, at: <https://cdn.aws.singtel.com/sustainabilityreport/2021/index.html>

annual targets leading up to 2025. Optus has similarly set its own five-year mid-term targets, and tracks and measures its progress. Optus also publishes these results annually in its sustainability report, as well as in the Singtel Group Sustainability Report. Singtel Group demonstrates commitment and progress towards achieving its emissions reduction targets based on actions to reduce emissions from group-wide operations, such as: targeting energy efficiency across its telecommunication infrastructure and office buildings, increasing on-site renewable energy generation and off-site renewable energy power purchase agreements, and leveraging smart mobile technologies to reduce energy consumption.¹⁵ By 2020, the Group achieved a carbon emissions intensity reduction of 70%, compared to 2015 and aims to conduct a comprehensive assessment of its Scope 3 emissions in 2022.

Strategy to Achieve the SPTs

Singtel Group and Optus intend to achieve the SPTs through the following strategy:

Singtel Group intends to invest in decarbonisation strategies across its operations in Singapore and Australia. These strategies include: (i) energy efficiency improvements across key energy intensive infrastructure, such as network infrastructure, data centres, satellite earth stations and office buildings, (ii) increasing on-site renewable energy generation, particularly solar in data centres and pop-up retail stores, (iii) off-site renewable energy power purchase agreements, and (iv) leveraging green ICT by exploring smart mobile technologies in the areas of connectivity, data centres, big data, and IoT to reduce energy consumption and emissions beyond the telecommunication industry.

Ambitiousness, Baseline and Benchmarks

To determine the ambitiousness of the SPTs, Sustainalytics considers: i) whether the SPTs go beyond business-as-usual trajectory, ii) how the SPTs compare to targets set by peers, iii) and how the SPTs compare with science.¹⁶

Singtel Group and Optus have set 2015¹⁷ as the baseline for all the SPTs to align with the baseline set in its SBTi target to reduce absolute scope 1 and 2 carbon emissions by 42% by 2030, which was approved in 2017. Sustainalytics recognizes the Issuers' intention to ensure consistency with the baseline set for the SBTi target, while noting that it is regular market practice.

To achieve the SPT, the Group commits to reduce its scope 1 and 2 emissions by an implied average annual rate of 5% per year between 2020 and 2030, while historical performance demonstrated an average annual increase of 1% between 2015 and 2020. Similarly, Optus commits to reduce its scope 1 and 2 emissions by an implied average annual rate of 6% per year between 2020 and 2030, while historical performance demonstrated an average annual increase of 1.7% between 2015 and 2020. Given this context, Sustainalytics' considers both SPTs to be significantly above the historical performances of both Issuers.

Based on the analysis Sustainalytics conducted of the Issuers' peer group in Singapore and Australia, both SPTs were considered to be among the leaders' targets, in a region where few peers set emissions reduction targets. Compared to global industry peers, specifically for scope 1 and 2 emissions in the telecommunication services industry, the SPTs align with the targets set by 29 operator groups representing 30% of mobile connections worldwide, which have committed to a reduction of at least 45% of their GHG emissions between 2020 and 2030.¹⁸ Given this context, Sustainalytics considers both SPTs to be aligned with those set by industry peers.

Singtel Group and Optus' target to reduce their absolute scope 1 and 2 GHG emissions is aligned with the Group's science-based target trajectory and is consistent with reductions required to keep warming to well below 2°C.

Overall Assessment

Sustainalytics considers the SPTs to be aligned with the Issuers' sustainability strategy and to be ambitious, given that: (i) they present a material improvement compared to historical performance, (ii) are aligned with those set by industry peers, and (iii) present a GHG reduction aligned with a well-below 2°C scenario.

¹⁵ Ibid

¹⁶ We refer here to contextual benchmarks, that indicate the alignment of targets with ecosystem boundaries.

¹⁷ The baseline year refers to the year ended the 31st of March 2015.

¹⁸ ITU, "ICT industry to reduce greenhouse gas emissions by 45 per cent by 2030" (2020), at: <https://www.itu.int/en/mediacentre/Pages/PR04-2020-ICT-industry-to-reduce-greenhouse-gas-emissions-by-45-percent-by-2030.aspx>

SPT 1a: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 25% by 2025	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
SPT 1b: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 42% by 2030				
SPT 2a: Reduce Optus’ absolute scope 1 and 2 GHG emissions by 25% by 2025	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
SPT 2b: Reduce Optus’ absolute Scope 1 and 2 GHG emissions by 42% by 2030				



Bond Characteristics

Singtel Group has disclosed that the financial characteristics of the bond transactions under the Framework will be linked to achievement of the SPTs for Singtel Group and Optus respectively by the target observation date specified in each bond issuance. Such characteristics could entail an adjustment to either the coupon rate or the premium upon maturity in the event that Singtel Group or Optus does not achieve their respective SPTs. The details for these adjustments will be specified in the relevant documentation of each bond issuance. Sustainalytics positively notes that all SPTs need to be met to avoid an adjustment in coupon rate or premium.



Reporting

The Issuers commit to report on their website annually on KPI progress SPT performance until the target observation date, in the Group’s Sustainability Report or any other documentation that the Group or Optus deems suitable. The Issuers further commit to disclose relevant information such as: (i) up-to-date information on KPI and SPT performance by the respective target observation date for each bond issuance; (ii) illustration of net positive environmental impact for each respective KPI and SPT; (iii) main factors in the event that SPTs cannot be achieved by the respective target observation date; and (v) any explanation to any adjustment to the KPI or SPTs. The Issuers’ reporting commitments are aligned with the SLBP.



Verification

Singtel Group commits to have an external verifier provide limited assurance on KPI and SPT performance annually, which will be published in the Group’s Sustainability Report or any other documentation that Singtel Group deems suitable, which is aligned with the SLBP on verification.

Section 2: Assessment of Singtel Group’s Sustainability Strategy

According to Sustainalytics’ ESG rating, Singtel Group’s overall management of material ESG issues is average among its industry peers. The Group publishes an annual sustainability report written per the GRI standards. The Group has established a dedicated sustainability team headed by a vice president, while its Management Committee reviews material ESG issues along with the Risk Management Committee. Optus is integrated in the development and delivery of the sustainability strategy of Singtel Group, and its climate action targets are aligned with those of the group.¹⁹ In the following section, Sustainalytics notes Singtel Group’s sustainability strategy and practices.²⁰

¹⁹ Singtel Singapore Telecommunications Limited Sustainability-Linked Bond Framework: <https://www.singtel.com/about-us/investor-relations/debt-investors>

²⁰ Singtel, “Sustainability Report 2021”, at: <https://cdn.aws.singtel.com/sustainabilityreport/2021/index.html>

In 2020, the Group revisited its strategic sustainability framework and enhanced its commitments on four key areas: (i) Climate Change and Environment, (ii) Sustainable Value Creation, (iii) People and Future of Work, and (iv) Commute Impact. As part of its efforts, the Group conducted a materiality assessment and identified 19 material ESG topics for its operations, which include "Climate Change & Carbon" and "Climate and Infrastructure Resilience". Under the Climate Change & Carbon pillar, the Group aims to achieve its SBTi targets by 2030 and net zero by 2050. For the Climate and Infrastructure Resilience area, the Group commits to facilitate investments in network adaptation and resilience, while disclosing long-term climate change risks and mitigation in line with the TCFD framework.

The Group's decarbonization strategy is supported by several environmental initiatives, particularly in the areas of energy efficiency and renewable energy. The Group aims to reduce its carbon footprint by targeting energy use reduction across key energy-intensive activities, such as network infrastructure, data centres, satellite earth stations and office buildings in its Singapore and Australia operations. In Singapore, Singtel Group has increased the use of on-site renewable energy, having built one of the largest single-roof solar-powered data centres in Southeast Asia. The Group also expects to source 25% of its energy needs in Singapore and Australia from renewable sources by 2025.

In FY 2020, the Group's activities resulted in an estimated 73,226 tCO₂e emissions avoided and a 24.7% reduction in carbon emissions per terabyte of data transferred. Additionally, the Group conducted a climate scenario analysis and completed a pilot study of physical and transitional climate risks in New South Wales, Australia, to identify material financial drivers and assumptions for nationwide TCFD scenario assessment practices in Singapore and Australia.

Optus became a signatory of the UN Global Compact in 2019,²¹ while Singtel Group is a member of the UN Global Compact Network in Singapore (GCNS).²² Singtel Group reports under the Task Force on Climate-related Financial Disclosure (TCFD) recommendations focus on physical risks and transitional risks.²³

Sustainalytics considers Singtel Group to have a strong sustainability strategy and considers that the sustainability-linked bonds eventually issued under the Framework will further support the Issuers' sustainability strategies.

Singtel Group's Environmental and Social Risk Management

According to Sustainalytics' ESG Risk Assessment, Singtel Group's exposure to ESG risks is of medium strength and in line with the sub-industry average. Overall, Sustainalytics notes that Singtel Group's management of material ESG issues is considered average. Sustainalytics recognizes that Singtel Group's defined targets are impactful, however achieving these SPTs in the relevant subindustry bears some ESG risks, such as product governance, data privacy security and carbon-own operations.

In the following section, Sustainalytics comments on Singtel Group's ability to mitigate such potential risks. As a wholly owned subsidiary of the Group, Optus adheres to the same risk mitigation measures and systems as the Group.²⁴

- To mitigate the product governance risks inherent to the sub-industry, Singtel Group adheres to the Quality-of-Service standards set by the Infocomm Media Development Authority (IMDA), which is a statutory board in the Singapore government that seeks to deepen regulatory capabilities for the converged information, communications and media sector.²⁵ The Quality-of-Service standards apply to Singtel Group's operations in Singapore only. In response to public concerns over electromagnetic energy, the Group provides information on how it complies with local and global standards regarding emission levels.
- Singtel Group has designated a chief data protection officer to monitor compliance with relevant data privacy regulations, such as PDPA in Singapore and the Privacy Act and Telecommunications Act in Australia. In addition, Singtel Group states that it has established mandatory annual training for all its employees on customer data privacy and protection as well as cyber security awareness. The Group carries out protection impact assessments to identify potential data risks and develops mitigation measures. The Group reports the number of privacy-related incidents and complaints in Singapore and Australia.
- To reduce the carbon footprint of its own operations, Singtel Group has been implementing energy-saving initiatives such as replacing, overhauling and optimizing chillers and related equipment, converting to energy-efficient mobile base stations, switching to energy-saving lighting and decommissioning unnecessary infrastructure.

²¹ United Nations Global Compact, "Singtel", at: <https://www.unglobalcompact.org/what-is-gc/participants/138226-Singtel-Optus-Pty-Limited>

²² Global Compact Network Singapore, "Singtel", at: <https://unglobalcompact.sg/members-profile?organisation=e13b1011-0036-4f80-9201-6175532ae9c8>

²³ Singtel, "TCFD", at: https://cdn.aws.singtel.com/sustainabilityreport/2019/assets/pdf/science_based_targets_and_tcf.pdf

²⁴ Singtel, "Sustainability Report 2021", at: <https://cdn.aws.singtel.com/sustainabilityreport/2021/index.html>

²⁵ IMDA, "About Us", at: <https://www.imda.gov.sg/Who-We-Are/about-imda>

In addition to the above, Sustainalytics notes that it has found no evidence of any major environmental or social controversies related to Singtel Group. Overall, Sustainalytics considers that Singtel Group has adequate management programmes and policies to mitigate risks that are material to its sub-industry.

Section 3: Impact of the SPTs

The telecommunications sector accounts for 2-3% of the total global energy demand.²⁶ The sector’s largest points of energy demand include network base stations with telephone exchanges, core networks and data centres.²⁷ The digitization of the economy, widespread smartphone use, growing consumer demand for ICT services and the fact that most electricity produced globally is still powered by fossil fuels are projected to increase global ICT sector emissions by up to 14% by 2040.²⁸ Further, to align with the Paris Agreement and limit global warming to 1.5°C above pre-industrial levels, the ICT industry would need to reduce GHG emissions by 45% by 2030, compared to the 2020 baseline.

To be aligned with the Climate Goals of the Paris Agreement, the International Telecommunication Union (ITU) outlined that a 45% GHG emissions reduction is needed for the ICT sector between 2020 and 2030. The shift to renewable and low-carbon energy is expected to account for most of the ICT industry’s GHG emissions reduction over this timeframe. Electricity accounts for 98% of reported carbon emissions from the telecommunications sector and data centre companies, so switching from fossil fuel-based to clean electricity shows significant potential for the industry.²⁹

Sustainalytics is of the opinion that Singtel Group’s focus and efforts in reducing scope 1 and 2 emissions will positively contribute to reducing the carbon footprint of the telecommunications services industry and support the ambitions of the Paris Agreement.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. The sustainability-linked bonds eventually issued under the Framework will contribute to advance the following SDG goals and targets:

KPI	SDG	SDG Target
KPI 1: Scope 1 and 2 Greenhouse Gas (GHG) Emissions for Singtel Group	7. Affordable and clean energy	7.3 By 2030, double the global rate of improvement in energy efficiency
KPI 2: Scope 1 and 2 Greenhouse Gas (GHG) Emissions for Optus	9. Industry, innovation and infrastructure	9.4. By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Conclusion

Singapore Telecommunications Limited and Singtel Optus Pty Limited intend to issue sustainability-linked bonds tying the coupon rate or the premium upon maturity to achievement of the following SPTs:

- (1) SPT 1a: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 25% from 2015 levels by 2025
- (2) SPT 1b: Reduce Singtel Group’s absolute scope 1 and 2 GHG emissions by 42% from 2015 levels by 2030
- (3) SPT 2a: Reduce Optus’ absolute scope 1 and 2 GHG emissions by 25% from 2015 levels by 2025

²⁶ McKinsey & Company, “The case for committing to greener Telecom Networks”, (2020) at: <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/the-case-for-committing-to-greener-telecom-networks>

²⁷ IEA, “Data Centres and Data Transmission Networks”, (2020), at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

²⁸ SouthPole, “The low-carbon future is digital: Why it pays for ICT companies to reduce emissions and invest in renewables”, (2019) at: <https://www.southpole.com/blog/the-low-carbon-future-is-digital-why-it-pays-for-ict-companies-to-reduce-emissions-and-invest-in-renewables>

²⁹ Greenpeace, “Solar streaming”, at: https://reenergise.org/resource/report-solar-streaming-whos-leading-the-telco-tech-and-it-race-to-renewables/?utm_source=miragenews&utm_medium=miragenews&utm_campaign=news

(4) SPT 2b: Reduce Optus' absolute scope 1 and 2 GHG emissions by 42% from 2015 levels by 2030

Sustainalytics considers the KPIs chosen to be strong given that they directly measure nearly all emissions that can be controlled by the Issuers, and that they can be benchmarked, in spite of not covering scope 3 emissions. Sustainalytics further considers the SPTs to be aligned with Singtel Group's sustainability strategy and to be ambitious, given that: (i) they present a material improvement compared to historical performance, (ii) are aligned with those of industry peers, and (iii) present a GHG reduction aligned with a well-below 2°C scenario.

Furthermore, Sustainalytics considers the reporting and verification commitments to be aligned with market expectations.

Based on the above, Sustainalytics considers the Singtel Group Sustainability-Linked Bond Framework to be in alignment with the five core components of the Sustainability-Linked Bond Principles 2020 and the prospective achievement of the SPTs to be impactful.

Appendix 1: Sustainability-Linked Bonds - External Review Form

Section 1. Basic Information

Issuer name: Singapore Telecommunications Limited

Sustainability-Linked Bond ISIN:

Independent External Review provider's name for second party opinion pre-issuance (sections 2 & 3): Sustainalytics

Completion date of second party opinion pre-issuance: October 8, 2021

Independent External Review provider's name for post-issuance verification (section 4): Not known

Completion date of post issuance verification:

At the launch of the bond, the structure is:

- a step-up structure a variable redemption structure

Section 2. Pre-Issuance Review

2-1 SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review:

- assessed all the following elements (complete review) only some of them (partial review):
- | | |
|---|---|
| <input type="checkbox"/> Selection of Key Performance Indicators (KPIs) | <input type="checkbox"/> Bond characteristics (acknowledgment of) |
| <input type="checkbox"/> Calibration of Sustainability Performance Targets (SPTs) | <input type="checkbox"/> Reporting |
| <input type="checkbox"/> Verification | |
- and confirmed their alignment with the SLBP.

2-2 ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- Second Party Opinion Certification
- Verification Scoring/Rating

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

2-3 EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)

Section 3. Detailed pre-issuance 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.

3-1 SELECTION OF KEY PERFORMANCE INDICATORS (KPIs)

Overall comment on the section (if applicable):
 The Singtel Group Sustainability-Linked Bond Framework includes the following KPIs: (i) Scope 1 and 2 GHG Emissions for the Singtel Group, and (ii) Scope 1 and 2 GHG Emissions for Singtel Optus Pty Limited (Optus), a wholly owned subsidiary of Singtel Group – “Issuers” herein refers to Optus and the Singtel Group jointly. Sustainalytics considers the KPIs to be strong based on their materiality, their scope of applicability, their relevance to the Issuers’ businesses, and their ability to be benchmarked.

List of selected KPIs:

- KPI 1: Scope 1 and 2 Greenhouse Gas (GHG) Emissions for Singtel Group
- KPI 2: Scope 1 and 2 Greenhouse Gas (GHG) Emissions for Optus

Definition, Scope, and parameters

- | | |
|--|---|
| <input checked="" type="checkbox"/> Clear definition of each selected KPIs | <input checked="" type="checkbox"/> Clear calculation methodology |
| <input type="checkbox"/> Other (please specify): | |

Relevance, robustness, and reliability of the selected KPIs

- | | |
|--|--|
| <input checked="" type="checkbox"/> Credentials that the selected KPIs are relevant, core and material to the issuer’s sustainability and business strategy. | <input checked="" type="checkbox"/> Evidence that the KPIs are externally verifiable |
| <input checked="" type="checkbox"/> Credentials that the KPIs are measurable or quantifiable on a consistent methodological basis | <input checked="" type="checkbox"/> Evidence that the KPIs can be benchmarked |
| <input type="checkbox"/> Other (please specify): | |

3-2 CALIBRATION OF SUSTAINABILITY PERFORMANCE TARGETS (SPTs)

Overall comment on the section (if applicable):
 Sustainalytics considers the SPTs to be aligned with the Issuers’ sustainability strategies. Sustainalytics notes that the SPTs: i) go beyond business as usual, ii) align with industry peers’ targets, and iii) align with the well-below 2°C climate scenario.

Rationale and level of ambition

- | | |
|--|---|
| <input checked="" type="checkbox"/> Evidence that the SPTs represent a material improvement | <input checked="" type="checkbox"/> Credentials on the relevance and reliability of selected benchmarks and baselines |
| <input checked="" type="checkbox"/> Evidence that SPTs are consistent with the issuer’s sustainability and business strategy | <input checked="" type="checkbox"/> Credentials that the SPTs are determined on a predefined timeline |
| <input type="checkbox"/> Other (please specify): | |

Benchmarking approach

- | | |
|--|--|
| <input checked="" type="checkbox"/> Issuer own performance | <input checked="" type="checkbox"/> Issuer’s peers |
|--|--|

- reference to the science Other (*please specify*):

Additional disclosure

- potential recalculations or adjustments description issuer's strategy to achieve description
- identification of key factors that may affect the achievement of the SPTs Other (*please specify*):

3-3 BOND CHARACTERISTICS

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

The Issuers will link the bonds' financial structure to achievement of the SPTs, namely by adjusting the coupon rate or premium upon maturity when a particular SPT specified in the SLB issuance is not met by the target observation date. Sustainalytics views these characteristics positively.

Financial impact:

- variation of the coupon
- Adjustment of the premium upon maturity
- Other (*please specify*):

Structural characteristic:

- ...
- ...
- Other (*please specify*):

3-4 REPORTING

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

The Issuers commit to report on their performance on the KPIs on an annual basis in the Singtel Group's Sustainability Report, which is published on the Group's website. The Issuers also commit to disclose relevant information that affect KPI performance, such as any KPI reassessments and baseline or scope adjustments, where relevant. The reporting commitments are aligned with the Sustainability-Linked Bond Principles.

Information reported:

- performance of the selected KPIs verification assurance report
- level of ambition of the SPTs Other (*please specify*):

Frequency:

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

Means of Disclosure

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

Where appropriate, please specify name and date of publication in the "useful links" section.

Level of Assurance on Reporting

- | | |
|---|--|
| <input checked="" type="checkbox"/> limited assurance | <input type="checkbox"/> reasonable assurance |
| | <input type="checkbox"/> Other (please specify): |

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

Section 4. Post-issuance verification

Overall comment on the section (if applicable):

The Issuers commit to have external limited assurance conducted on their KPI performance at the communicated SPT deadline, which is aligned with market expectations.

Information reported:

- | | |
|--|--|
| <input type="checkbox"/> limited assurance | <input type="checkbox"/> reasonable assurance |
| | <input type="checkbox"/> Other (please specify): |

Frequency:

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

Material change:

- | | |
|---|--|
| <input type="checkbox"/> Perimeter | <input type="checkbox"/> KPI methodology |
| <input type="checkbox"/> SPTs calibration | |

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