

Second-Party Opinion

TELUS Sustainability-Linked Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the TELUS Sustainability-Linked Bond Framework aligns with the Sustainability-Linked Bond Principles 2020. This assessment is based on the following:

- (1) **Selection of Key Performance Indicator (KPI)** The TELUS Sustainability-Linked Bond Framework includes one KPI: Scope 1 and 2 GHG emissions (see Table 1). Sustainalytics considers the KPI chosen to be adequate based on its scope and applicability, and the clear and consistent definitions.
- (2) **Calibration of Sustainability Performance Target (SPT)** Sustainalytics considers the SPT to be aligned with the Issuer's sustainability strategy. Sustainalytics further considers the SPT to be ambitious based on Issuer's historical performance, performance against peers and external contextual benchmarks.
- (3) **Bond Characteristics** TELUS will link the bond's financial/ structural characteristics to the achievement of the SPT, namely a premium payment amount or step-up margin amount. If TELUS achieves the SPT, there will be no impact on the coupon rate.
- (4) **Reporting** TELUS commits to report on an annual basis on its performance of the KPI in its Sustainability Report or other similar report(s), and also on its website. TELUS commits to disclose relevant information which may enable monitoring of the progress of the selected KPI, such as any significant structural changes. The reporting commitments are aligned with the Sustainability-Linked Bond Principles.
- (5) **Verification** TELUS commits to have an external limited assurance conducted on its KPI performance annually and at the communicated SPT deadline, which is aligned with market expectations.

Evaluation Date	June 11 th , 2021
Issuer Location	Vancouver, Canada

The SPTs contribute to the following SDGs:



Overview of KPIs and SPTs

KPI	Baseline	SPT	Strength of the KPI	Ambitiousness of SPT
Scope 1 and 2 GHG emissions	2019	Reduce absolute Scope 1 and 2 GHG emissions by 46% from 2019 levels by 2030	Adequate	Ambitious

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Scope of Work and Limitations

TELUS Corporation ("TELUS", the "Company", or the "Issuer") has engaged Sustainalytics to review the SLB Framework and provide an opinion on the alignment of the notes with the Sustainability-Linked Bond Principles (2020).¹

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

As part of this engagement, Sustainalytics exchanged information with various members of TELUS' management team to understand the sustainability impact of their business processes and SPT, as well as reporting and verification processes of aspects of the TELUS Sustainability-Linked Bond Framework. TELUS' representatives have confirmed that:

- (1) They understand it is the sole responsibility of the Issuer to ensure that the information provided is complete, accurate or 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 TELUS Sustainability-Linked Bond Framework and should be read in conjunction with the TELUS Sustainability-Linked Bond Framework. Any update of the present Second-Party Opinion will be conducted according to the agreed-upon engagement conditions between Sustainalytics and TELUS. Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the TELUS Sustainability-Linked Bond 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 SPT of the KPI but does not measure the KPI's performance. The measurement and reporting of the KPI is the responsibility of the Bond issuer. No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favor or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that TELUS has made available to Sustainalytics for the purpose of this Second-Party Opinion.

The Second-Party Opinion is valid for issuances aligned with the respective Framework for which the Second-Party Opinion was written and aligned with the methodology to calculate the KPI performance outlined in the Second-Party Opinion up to 24 months 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 material M&A or change in business activity) which has a bearing on the achievement of the SLBs or the materiality of the KPI.

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¹ The Sustainability Linked Bond Principles (SLBP) were launched by ICMA in June 2020. They are 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 refers to science based benchmarks.

Introduction

TELUS is one of Canada's top three communications technology and wireless service providers,⁴ with over 10 million mobile phone subscribers nationwide constituting about 30% of the total market. It is also the incumbent local exchange carrier (the legacy telephone provider) in the western Canadian provinces of British Columbia and Alberta, where it provides internet, television, and landline phone services. It also has a small wireline presence in eastern Quebec. In recent years TELUS has moved to bring fibre optics to its customers over most of its wireline footprint as it upgrades its legacy copper network. TELUS' other businesses participate in the international business services, health, security, and agriculture industries.

Under the TELUS Sustainability-Linked Bond Framework (the "Framework"), TELUS intends to issue Sustainability-Linked Bonds (SLBs) where the margin/coupon rate of the bond is tied to the achievement of the SPT for one KPI related to the absolute reduction of Scope 1 and 2 GHG emissions.

TELUS has engaged Sustainalytics to review the Framework and provide an opinion on the alignment of the Framework with the SLBP.

The KPI and SPT used by TELUS are defined in Tables 1 and 2 below.

Table 1: KPI Definitions

KPI	Definition
Scope 1 and 2 GHG emissions	Company-wide absolute GHG emissions (tCO ₂ e) covering 99% of all Scope 1 and 2 emissions in TELUS' GHG inventory, calculated in line with the GHG Protocol Corporate Standard. The GHG emissions inventory covers all relevant GHG emissions from all relevant sources and subsidiaries, including direct carbon emissions from the combustion of biofuels or biomass. For the base year of 2019, Scope 1 and 2 represented 6.5% of TELUS' total emissions. ⁵

Table 2: SPT and Past Performance

KPI	2017	2018	2019 (baseline)	SPT 2030
Scope 1 and 2 GHG emissions (tCO ₂ e)	335,849 tCO ₂ e	311,990 tCO ₂ e	302,579 tCO ₂ e	Reduce absolute Scope 1 and 2 emissions by 46% from 2019 levels by 2030

⁴ CRTC, "2019 Communications Monitoring Report", at: <https://crtc.gc.ca/eng/publications/reports/policymonitoring/2019/cmr10.htm#a5.2>

⁵ For the base year of 2019, the Company's Scope 1 and 2 represented 6.53% of its total emissions, while Scope 3 represented 93.4%.

Sustainalytics' Opinion

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

Sustainalytics is of the opinion that the TELUS Sustainability-Linked Bond Framework aligns with the five core components of the Sustainability-Linked Bond Principles 2020 (SLBP).



Selection of Key Performance Indicators (KPIs)

Relevance and Materiality of KPIs

Sustainalytics in its assessment of materiality and relevance considers i) whether an indicator speaks to a material impact of the Issuer business on environment or social issues, and ii) to what portion of impact the KPI is applicable.

Sustainalytics considers the KPI, Scope 1 and 2 GHG emissions, to be material and relevant based on the following:

- i. Sustainalytics' ESG Risk Rating identifies "Carbon - Own Operations"⁶ as a material ESG issue (MEI) for companies in the "Telecommunication Services" industry. Although this industry has a medium exposure to this MEI as its energy consumption is less intensive than other industries – such as utilities or extractives (e.g. mining and oil & gas) – the rapid expansion in telecommunications infrastructure, including future deployment of 5G, fibre technologies, and growing customer demand for data and connectivity is expected to substantially increase the energy requirements of companies like TELUS.
- ii. Sustainalytics considers this a direct KPI as it directly measures GHG emissions related to the energy usage associated with TELUS' office buildings, network infrastructure, fuel usage for its vehicle fleet, and data centres.
- iii. The Sustainability Accounting Standards Board (SASB)⁷ identifies energy procurement and efficiency as relevant topics to track and disclose by the Telecommunication Services industry based on the substantial amounts of energy associated with telecom network infrastructure and operations. Energy consumption can contribute significantly to GHG emissions if not managed sustainably by telecom companies.⁸

In terms of applicability, Sustainalytics notes that the KPI covers Scope 1 and 2 emissions but not Scope 3 emissions. Scope 3 emissions contribute roughly 93.5% to the Company's total emissions (Scope 1, 2 and 3).⁹ Although this indicates the KPI's limited scope for impact on the Company's overall emissions (6.5%),

⁶ The Sustainalytics's 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.

⁷ The SASB Foundation was founded in 2011 as a not-for-profit, independent standards-setting organization. The SASB Foundation's mission is to establish and maintain industry-specific standards that assist companies in disclosing financially material, decision-useful sustainability information to investors. SASB Standards identify the subset of environmental, social, and governance issues most relevant to financial performance in each of 77 industries.

⁸ SASB, Telecommunication Services Industry Standard, 2018, at: <https://www.sasb.org/standards/download/>

⁹ Most information and communication technologies companies (ICTs) have significant value chain (Scope 3) emissions, at: <https://www.itu.int/en/action/environment-and-climate-change/Documents/20200227-Guidance-ICT-companies-report.PDF>

Sustainalytics notes that 80% of Scope 3 emissions originate from purchased goods and services,¹⁰ and capital goods,¹¹ over which TELUS has little or no direct control.

In addition, over the same timeframe, TELUS has committed to reducing Scope 3 emissions, including GHG emissions from business travel and employee commuting and GHG emissions from purchased goods and services, capital goods, and use of sold products by 75% per million dollars’ revenue. While not included in the KPI, Sustainalytics positively notes that these Scope 3 emissions have been included and validated under the Science Based Targets initiative (SBTi), demonstrating that TELUS is addressing the main sources of its value chain GHG emissions.¹²

KPI Characteristics

Sustainalytics in its assessment of the KPI characteristics 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 performance of the Issuer on the material environmental or social issue, and iv) if applicable, whether the methodology can be benchmarked to an external contextual benchmark.¹³

Sustainalytics considers TELUS’ definition and methodology to calculate the KPI to be clear and consistent, highlighting the transparency around reporting GHG emissions, to be directly linked to its operational performance.

In addition, TELUS calculates its Scope 1 and 2 emissions in accordance with the GHG Protocol Corporate Standard,¹⁴ which is commonly used in the industry and therefore facilitates benchmarking against external carbon trajectories as well as peer performance. Additionally, TELUS uses a number of publicly available data sources to calculate GHG emissions based on the emission factors in the countries in which it operates.

Overall Assessment

While noting that the KPI, Scope 1 and 2 GHG emissions (tCO₂e), accounts for a small performance (6.5%) of TELUS’ overall GHG emissions, Sustainalytics considers to be adequate given that: (i) it measures performance on a relevant and material ESG issue for the Company, (ii) it directly measures its operational carbon performance, (iii) the calculation methodology is aligned with GHG Protocol Corporate Standard, and therefore, (iv) supports benchmarking against external emission reduction trajectories.

Scope 1 and 2 GHG emissions (tCO₂e)	Not Aligned	Adequate	Strong	Very strong
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Calibration of Sustainability Performance Targets (SPTs)

Alignment with Issuer’s Sustainability Strategy

TELUS has set the following SPT for its KPI: Reduce absolute Scope 1 and 2 GHG emissions by 46% from 2019 levels by 2030.

¹⁰ This category includes all upstream (i.e., cradle-to-gate) emissions from the production of products purchased or acquired by the reporting company in the reporting year. Products include both goods (tangible products) and services (intangible products), at: https://ghgprotocol.org/sites/default/files/standards_supporting/Chapter1.pdf

¹¹ This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year, at: https://ghgprotocol.org/sites/default/files/standards_supporting/Chapter2.pdf

¹² GN, “TELUS becomes first national telecom in Canada to set science-based GHG emissions reduction targets approved by STBi”, (2021), at: <https://www.globenewswire.com/en/news-release/2021/06/07/2243066/0/en/TELUS-becomes-first-national-telecom-in-Canada-to-set-science-based-GHG-emissions-reduction-targets-approved-by-STBi.html>

¹³ 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.

¹⁴ Greenhouse Gas Protocol, “Corporate Standard”, at: <https://ghgprotocol.org/corporate-standard>

Sustainalytics considers the SPT to be aligned with TELUS' sustainability strategy (please refer to Section 2 for analysis of the credibility of TELUS sustainability strategy).

TELUS has been reporting on its Scope 1 and 2 GHG emissions since 2010, and it recently measured its Scope 3 emissions (with 2019 as a base year) by first time while setting its science-based reduction targets. This shows a committed organizational approach to measure and mitigate its climate change impact (please refer to section 3 for further analysis).

Furthermore, the Company has established targets to address a significant portion of its value chain (Scope 3) emissions, of which it has limited control, and that are linked to clear and meaningful reduction targets validated by the SBTi. Sustainalytics positively notes TELUS' intention to reduce Scope 3 emissions and that this strategy is measured on its financial performance. Overall, this is in line with TELUS' broader long-term sustainability goals.

Strategy to Achieve the SPT

TELUS intends to achieve the SPT through the following strategy:

- **Low carbon power supply:** Access and purchase of renewable electricity has been one of the most cost-effective solutions used by the information and communication technologies (ICT) sector to cut its operational emissions.^{15,16} TELUS' strategy to achieve the SPT is to continue investing in renewable energy in the form of long-term Power Purchase Agreements (PPAs)¹⁷ to, in effect, power its buildings and networks, enabling Renewable Energy Certificates (RECs). As at the end of FY2020, TELUS had successfully negotiated four PPAs that will provide 100% of TELUS' electricity needs in Alberta, Canada, from renewable sources such as wind and solar.¹⁸
- **Enhance energy efficiency in buildings and data centres:** TELUS has an energy management program led by its network management team focused on driving energy efficiencies across its business, and results are tracked and reported monthly. This program, which sets annual GWh reduction targets, includes the following: (i) HVAC equipment upgrades, such as replacing legacy natural gas chillers with new electric chillers; (ii) Project Clean Sweep – assessment and decommissioning of unrequired servers and other electronic equipment; (iii) Lighting retrofits – replacing T12 and T8 lighting with LED; and (iv) Real estate consolidation – turn down or subleasing of unneeded space.
- **Shift remote generators away from traditional fossil fuels:** TELUS is committed to implementing innovative solutions for alternatives to diesel required to power remote generators, most often for remote cell towers. To this end, the Company has installed more than 30 solar arrays at various sites with suitable space for such installations. Additionally, TELUS is exploring the potential for newer solar technologies and wind turbine solutions.
- **Fleet electrification:** in conjunction with the Sustainability team and internal stakeholders leading the installation, repair and construction teams (primary vehicle users), TELUS' procurement and fleet management team is leading the development of a comprehensive fleet electrification strategy, including charging infrastructure, to reduce vehicle fuel-related GHG emissions – which accounts for approximately 10% of its combined total scope 1 and 2 emissions. TELUS communicated to Sustainalytics the existence of ongoing pilot projects with small EV deployments intended to gather the feasibility information, including impacts to fuel, maintenance costs, and vehicle suitability. TELUS is also consulting with the EV industry to help the Company build the strategy.
- **Smart buildings:** TELUS' building standards include alignment to LEED Gold or better criteria for newly constructed offices and data centres. Past examples include: (i) TELUS Garden (Vancouver) – in 2015 earned the distinction of the highest LEED Platinum scorecard ever submitted to Canada's Green Building Council; (ii) TELUS Sky (Calgary) - LEED Platinum tower, with full completion expected in 2021; and (iii) Intelligent Internet Data Centres (Rimouski, Quebec and Kamloops, B.C.) - ranking among the top-

¹⁵ ITU, "Guidance for ICT companies setting science based targets", at: <https://www.itu.int/en/action/environment-and-climate-change/Documents/20200227-Guidance-ICT-companies-report.PDF>

¹⁶ UNFCCC, "Telecoms sector agrees pathway to net-zero emissions", (2020), at: <https://unfccc.int/news/telecoms-sector-agrees-pathway-to-net-zero-emissions>

¹⁷ TELUS communicated to Sustainalytics that all PPAs will expire post SPT observation date.

¹⁸ TELUS communicated to Sustainalytics that one of these PPAs is active, while the rest will be active as of Q1 2022.

performing centres in North America, with a 1.15 Power Usage Effectiveness (PUE) rating, and built to LEED Gold standards, while its retrofitted Laird Data Centre in Toronto is LEED Gold certified.

Ambitiousness, Baseline and Benchmarks

To determine the ambitiousness of an SPT, Sustainalytics considers whether the SPT goes beyond business as usual trajectory, ii) how the SPT compares to targets set by peers, iii) and how it compares with science.¹⁹

TELUS has set 2019 as the baseline year for its SPT, as that is the most recent full year of GHG data available. TELUS has disclosed that 2020 results include atypical reductions in Scope 1 and 2 GHG emissions caused by impacts of the COVID-19 pandemic.

Sustainalytics was able to use the following benchmarks to assess ambitiousness: past performance, peer performance, and SBTi approved targets.

In terms of past performance, TELUS achieved a 37% GHG emission reduction in 2020 compared to 2010.²⁰ In recent years, net GHG emissions decreased by 1.9% between 2016 and 2017, a further 7.1% decrease between 2017 and 2018, and a 3% decrease between 2018 and 2019.²¹ Sustainalytics considers TELUS’ historical performance to be aligned with the SPT.

In comparison to its peers, TELUS’ SPT is aligned with respect to Scope 1 and 2 emission reduction targets in the telecommunication services industry. Based on the analysis Sustainalytics conducted on TELUS’ peer group, 29 operator groups, representing 30% of the mobile connections worldwide, have committed to a reduction of at least 45% of GHG emissions between 2020 and 2030, according to International Telecommunications Union.²² Furthermore, Sustainalytics identified some companies in this subgroup to have set more ambitious emissions reduction targets.

Sustainalytics notes that SBTi classifies TELUS’ target to reduce its absolute Scope 1 and 2 emissions by 46% from 2019 levels by 2030 in line with a 1.5°C trajectory as verified by the SBTi.

Overall Assessment

Sustainalytics considers the SPT to be aligned with TELUS 's sustainability strategy and to be ambitious, given that: (i) it is in line with its historical performance, (ii) it is aligned with its industry peers, and (iii) it presents a GHG reduction aligned with a 1.5°C scenario.

Reduce absolute Scope 1 and 2 GHG emissions by 46% by 2030 compared to 2019	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
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Bond Characteristics

TELUS has disclosed that the financial characteristics of bond transactions under this Framework will be linked to the failure to achieve SPT specified in the Framework. Such characteristics could be a premium payment or step-up margin amount in the event that TELUS does not achieve the SPT. This information will be specified in the relevant documentation of the specific bond transaction and will include specifics with respect to payment

¹⁹ We refer here to contextual benchmarks that indicate the alignment of targets with ecosystem boundaries.
²⁰ TELUS, “Sustainability Report 2020”, at: https://downloads.ctfassets.net/rz9m1rynx8pv/3GDqfZZgftN7aowMUohjUL/5acab48f8a0a4b4e32242e8225b07cf0/TELUS_Sustainability_2021_APR27_FINAL-s.pdf
²¹ TELUS, “2017 Sustainability Report”, at: https://assets.ctfassets.net/rz9m1rynx8pv/6PsGKFFShtlPIqjbNR5krR/c6049bd16a42b2b9e4a0fe60d4f35117/2019_TELUS_Sustainability_Report-04_20.pdf
²² 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>

mechanisms and back-up mechanisms in case the SPT cannot be calculated or observed, or cannot be calculated or observed in a satisfactory manner.



Reporting

TELUS commits to report on an annual basis on its performance on the KPI, and expects to include the relevant figures in its Sustainability Report or other similar report(s) as the case may be. This reporting will be also available on its website and is aligned with the SLB Principles. TELUS further commits to disclose on events, such as acquisitions or divestitures, including events not within its control, such as changes in the regulatory environment, to the extent such events substantially impact the calculation of the KPI, and require the restatement of the SPT and/or pro-forma adjustments of baselines or KPI scope.



Verification

TELUS commits to having an external verifier provide a limited assurance on the published KPI performance figures for each fiscal year on and at the SPT deadline, which will be included in the Company's annual Sustainability Report or other similar report(s) as the case may be. Sustainalytics notes that this is aligned with the SLB Principles on verification.

Section 2: Assessment of TELUS' Sustainability Strategy

Credibility of TELUS' Sustainability Strategy

According to Sustainalytics' ESG Risk Ratings, TELUS' overall management of material ESG issues (MEIs) is strong, ranking in the top 10% of best-performing companies within its sub-industry.²³ TELUS' Board has risk oversight of ESG issues through the Corporate Governance Committee, and it has aligned executive pay with ESG performance. Furthermore, TELUS links organizational sustainability performance to compensation for all team members through its corporate scorecard, which affects the company-wide performance bonus structure (sustainability pay link).²⁴ The Sustainability and Environment Team reports to the Executive Vice-President and Chief Financial Officer, responsible for the development and governance of the Company's sustainability strategy.²⁵ TELUS became a signatory of the United Nations Global Compact (UNGC) in 2010 with Advanced level qualification for its Communication of Progress since 2014²⁶, and it has supported the Task Force on Climate-related Financial Disclosures (TCFD) since 2017.²⁷ TELUS has a credible and consistent sustainability strategy.

TELUS has been ranked on the Dow Jones Sustainability World Index for five consecutive years and on the North American Index for twenty years in a row.²⁸ The Company adopted an Environmental policy²⁹ in 1997, last revised in May 2021, and it is considered very strong according to Sustainalytics' ESG Risk Ratings. In its 2020 Sustainability Report³⁰, TELUS identified four priorities, including (i) giving back to communities, (ii) caring for our planet, (iii) innovating in healthcare, and (iv) empowering Canadians with connectivity. The Company's efforts to improve its environmental performance are aimed at (i) addressing climate change by reducing energy usage and the resulting GHG emissions; (ii) using resources sustainably while minimizing the waste generated in their operations; (iii) improving handling of electronic and hazardous waste; (iv) reducing water consumption, and (v) implementing strict environmental management and compliance programs.

In FY2020, TELUS reported a 37% reduction in GHG emissions since 2010 and developed a set of targets to achieve operational net carbon neutrality by 2030. The Company has committed to reducing Scope 1 and 2 emissions and a significant portion of its Scope 3 emissions, with targets validated in accordance with the SBTi validation protocol (April 2021). In addition to these targets, TELUS' products such as TELUS Agriculture solutions and TELUS Health support a low-carbon transition through virtual connectivity and limited travel.

TELUS' 2020 Sustainability Report was written in accordance with GRI Standards (Core Option) and in alignment with recommendations of the Sustainability Accounting Standards Board (SASB). Sustainalytics considers TELUS to have a strong sustainability strategy and that SLBs will further support TELUS' sustainability strategy.

²³ This assessment has been derived from Sustainalytics' ESG Risk Ratings framework on May 31st 2021, comparing TELUS with 96 peers (9 out of 97) in the global Telecommunication Services sub-industry

²⁴ TELUS, "Sustainability Report 2020", at:

https://downloads.ctfassets.net/rz9m1rynx8pv/4b0g0vtonuABwWIk271He4/c0877d06aa938fa67a4216e601fa21e0/TELUS_Sustainability_2021_APR_1_FINAL.pdf

²⁵ TELUS Corporation, "Annual Information Form for the year ended December 31, 2020", at:

https://assets.ctfassets.net/rz9m1rynx8pv/3MK5gsgy7hy2rWSyIFfSqV/2fb2a3e8516315cc296dad79e71503f3/TELUS_2021_Annual_Information_Form.pdf

²⁶ United Nations Global Compact, "TELUS Corporation", at: <https://www.unglobalcompact.org/what-is-gc/participants/12156>

²⁷ Task Force on Climate-Related Financial Disclosures, "Supporters", at: <https://www.fsb-tcf.org/supporters/>

²⁸ TELUS, "TELUS is the only North American telecom named to the Dow Jones Sustainability™ World Index", at:

<https://www.telus.com/en/about/news-and-events/media-releases/telus-is-the-only-north-american-telecom-named-to-the-dow-jones-sustainability-world-index>

²⁹ TELUS, "Environmental Policy", at: <https://www.telus.com/en/about/policies-and-disclosures/environmental-responsibility/environmental-policy>

³⁰ TELUS, "Sustainability Report 2020", at:

https://downloads.ctfassets.net/rz9m1rynx8pv/4b0g0vtonuABwWIk271He4/c0877d06aa938fa67a4216e601fa21e0/TELUS_Sustainability_2021_APR_1_FINAL.pdf

TELUS' Environmental and Social Risk Management

Overall, Sustainalytics notes that the ESG risk management of TELUS is considered strong. Sustainalytics also recognizes that while TELUS' defined targets are impactful; it is acknowledged that achieving the SPT bears environmental and social risks related to Product Governance and Data Privacy and Security.

In the following section, Sustainalytics comments on TELUS' ability to mitigate the above-mentioned potential risks.

- **Product Governance.** Since the telecom industry provides the backbone of modern infrastructure and essential services, quality management and network resilience, including sensitivity to physical climate change risks, are critical. TELUS conducted scenario analyses in 2020 to better understand the potential risks of climate change to the Company in different climate scenarios. TELUS considers ongoing risk-based optimization of disaster recovery capabilities in its enterprise risk assessment process and related business continuity planning as a key focus for preventing outages and limiting their impact on operations and customers. In addition, TELUS identifies transition risks related to climate change, such as the impact of changes in policy or implementation of lower-emission technology. The Sustainability and Environment team provides a quarterly report to the Corporate Governance Committee and the Enterprise Risk Management team reports quarterly to the Audit Committee on enterprise risk. These reports contain pertinent information regarding the Company's environmental and climate-related risks and related compliance activities and potential liabilities. The Corporate Governance Committee also oversees climate-related opportunities as they arise or are otherwise identified and discussed during quarterly Committee meetings. The CEO and Executive Team are responsible for assessing and managing climate-related risks and mitigation.³¹ Detailed information on TELUS' risk assessment and mitigation process is made available in the Company's 2020 Management's Discussion and Analysis.³²
- **Data Privacy and Security.** There are elevated operational and regulatory risks related to Data Privacy and Security governance.³³ TELUS has a comprehensive Privacy Management Program Framework³⁴, in which it details various operational controls for identifying privacy risks. The framework includes assessments for privacy, security, and threat issues. All team members, including contractors, must take and pass annual privacy training. TELUS' Chief Data & Trust Officer manages its Privacy Management Program and reports on material privacy matters to the board of directors, CEO, and other executives. The Data & Trust Office is responsible for regularly monitoring and reporting privacy-related compliance issues. TELUS' management of quality issues includes significant improvements to its network, such as upgrades to fibre-to-the-home (FTTH). TELUS is committed to implementing security safeguards appropriate to the sensitivity of information.

In addition to the above, Sustainalytics notes that it has found no evidence of any major environmental or social controversies related to TELUS. Overall, Sustainalytics considers that TELUS has strong management programs and policies to mitigate risks that are material to the Company's sub-industry.

³¹ TELUS Corporation, "Annual Information Form for the year ended December 31, 2020", at: https://assets.ctfassets.net/rz9m1rynx8pv/3MK5gsgy7hy2rWSyIFfSqV/2fb2a3e8516315cc296dad79e71503f3/TELUS_2021_Annual_Information_Form.pdf

³² TELUS, "Annual Report 2020", at: https://assets.ctfassets.net/rz9m1rynx8pv/RhDeVJUMvjqrFwVycTU5L/9465279e0154bccef0d00c926b3794bf/TELUS_2020_annual_report_acc.pdf

³³ This assessment has been derived from Sustainalytics' ESG Risk Rating

³⁴ TELUS, "TELUS' Privacy Management Program Framework" (2019), at: https://assets.ctfassets.net/rz9m1rynx8pv/5kyYDtH9mEmq4B5GasM20x/0c1bd37b8748c3a7e6880eb5943f64f5/19-1326_TELUS_PrivacyManagementProgram_external-EN-Nov21.pdf

Section 3: Impact of the SPT Chosen

The Telecommunication Services industry is in the midst of a global transformation, driven by the rollout of 5G technology, a new wireless standard expected to enable faster connection speeds and significantly improve bandwidth and lower latency. Large telecom networks are energy-intensive to operate, and the deployment of 5G will impose even greater electricity demands given that a lot more equipment needs to be installed and potentially more data needs to be processed. The IEA estimates that since 2010, “the number of internet users worldwide has doubled while global internet traffic has grown 12-fold.³⁵ The rapid increases in data traffic could mean an increasing energy consumption in the sector which contributes about 2% of global carbon emissions.³⁶

The largest single energy demand for traditional telecom service providers is the electricity needed to run network base stations, with telephone exchanges, core networks, and data centres making up significant loads and representing on average 20-40% operational expenditures.³⁷ According to the US Department of Energy, the data centres that form the hubs of modern networks consume 10–50 times more energy per unit of floor space, on average, than commercial office buildings.³⁸ However, improvements in energy efficiency have helped limit energy demand growth from data centres and data transmission networks, which accounted for around 1% of global electricity use in 2019.³⁹ Furthermore, telecom carriers investing significantly in fibre technologies to directly connect homes and businesses, including TELUS who is well advanced in its fibre deployment, are expected to see improvements in energy consumption due to the higher energy efficiency associated with fibre compared to older broadband network technologies. Additionally, there is the potential for further benefits with the removal of less efficient equipment no longer required within fibre-connected neighbourhoods. The switch to 5G can also provide some environmental advantages, as it is a critical component to enable the widespread use of technologies that require lower latency such as autonomous vehicles.⁴⁰

Despite this, continued efforts by governments and the ICT industry to advance energy efficiency and renewable energy procurement will be crucial to limit growth in energy demand and emissions going forward. In this area, the International Telecommunication Union (ITU) highlighted that a 45% GHG emission reduction between 2020-2030 by the ICT sector is needed to align with the Paris Agreement’s climate goals. The shift to renewable and low-carbon energy sources is expected to abate most of the industry’s GHG emission reductions over the same timeframe.⁴¹

Sustainalytics is of the opinion that TELUS’ focus and efforts in reducing Scope 1 and 2 emissions will positively contribute to reducing the environmental footprint of the telecommunications services industry and support the ambitions of the Paris Agreement in keeping global warming below 1.5°C.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This sustainability linked bond advances the following SDG goal and target:

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

³⁵ IEA, “Data Centres and Data Transmission Networks”, (2020), at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

³⁶ S&P Global, “ESG Industry Report Card: Telecoms”, (2020), at: <https://www.maalot.co.il/Publications/GRB20200824143602.pdf>

³⁷ IEA, “Data Centres and Data Transmission Networks”, (2020), at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

³⁸ Berkeley National Laboratory, “United States Data Center Energy Usage Report”, http://eta-publications.lbl.gov/sites/default/files/lbnl-1005775_v2.pdf

³⁹ IEA, “Data Centres and Data Transmission Networks”, (2020), at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

⁴⁰ Columbia University, “The Coming 5G Revolution: How Will It Affect the Environment?”, (2020), at: <https://news.climate.columbia.edu/2020/08/13/coming-5g-revolution-will-affect-environment/>

⁴¹ 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>

Conclusion

TELUS intends to issue Sustainability-Linked Bonds which will tie the coupon rate to the achievements of the following SPT:

- Scope 1 and 2 GHG emissions (tCO₂e): To reduce absolute Scope 1 and 2 GHG emissions by 46% from 2019 levels by 2030

Sustainalytics considers the KPI chosen to be Adequate based on its scope and applicability, and the clear and consistent definitions, and the SPT to be Ambitious based on the Issuer's historical performance, performance against peers and external contextual benchmarks. Furthermore, Sustainalytics considers the reporting and verification commitments to be aligned with market expectations.

Based on the above, Sustainalytics considers TELUS' Sustainability-Linked Bond Framework to be in alignment with the five core components of the SLBP and the prospective of achievement of the SPT to be impactful.

Appendix 1: Sustainability-Linked Bonds - External Review Form

Section 1. Basic Information

Issuer name: TELUS Corporation

Sustainability-Linked Bond ISIN: Not known at the time of publication.

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

Completion date of second party opinion pre-issuance: June 11th, 2021

Independent External Review provider's name for post-issuance verification (section 4): not known at the time of publication.

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:

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

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> 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)

TELUS intends to issue Sustainability-Linked Bonds which will tie the coupon rate to the achievements of the following SPTs:

- Scope 1 and 2 GHG emissions (tCO2e): To reduce absolute Scope 1 and 2 GHG emissions by 46% from 2019 levels by 2030

Sustainalytics considers the KPI chosen to be adequate based on its scope and applicability, and the clear and consistent definitions, and the SPT to be ambitious based on Issuer’s historical performance, performance against peers and external contextual benchmarks.

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

Based on the above, Sustainalytics considers TELUS’ Sustainability-Linked Bond Framework to be in alignment with the five core components of the SLBP and the prospective of achievement of the SPT to be impactful.

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 TELUS Sustainability-Linked Bond Framework includes one KPI: Scope 1 and 2 GHG emissions (see Table 1). Sustainalytics considers the KPI chosen to be adequate based on its scope and applicability, and the clear and consistent definitions.

List of selected KPIs:

- Scope 1 and 2 GHG emissions (tCO2e):

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 SPT to be aligned with the Issuer’s sustainability strategy. Sustainalytics further considers the SPT to be ambitious based on Issuer’s historical performance, performance against peers and external contextual benchmarks.

Rationale and level of ambition

- Evidence that the SPTs represent a material improvement
- Evidence that SPTs are consistent with the Issuer's sustainability and business strategy
- Credentials on the relevance and reliability of selected benchmarks and baselines
- Credentials that the SPTs are determined on a predefined timeline
- Other (please specify):

Benchmarking approach

- Issuer own performance
- reference to the science
- Issuer's peers
- Other (please specify):

Additional disclosure

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

3-3 BOND CHARACTERISTICS

Overall comment on the section (if applicable): TELUS will link the bond's financial/ structural characteristics to the achievement of the SPT, namely a premium payment amount or step-up margin amount. If TELUS achieves the SPT, there will be no impact on the coupon rate.

Financial impact:

- variation of the coupon
- premium payment amount
- Other (please specify):

Structural characteristic:

- Other (please specify):

3-4 REPORTING

Overall comment on the section (if applicable): TELUS commits to report on an annual basis on its performance of the KPI in its Sustainability Report, or other similar report(s), on its website. TELUS commits to disclose relevant information that affects the KPI performance, such as any significant structural changes. The reporting commitments are aligned with the Sustainability-Linked Bond Principles.

Information reported:

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

Frequency:

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

Means of Disclosure

- Information published in financial report
- Information published in ad hoc documents
- Reporting reviewed (*if yes, please specify which parts of the reporting are subject to external review*):
- Information published in sustainability report
- Other (*please specify*):

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

Level of Assurance on Reporting

- limited assurance
- reasonable assurance
- 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*): TELUS commits to have an external limited assurance conducted on its KPI performance annually and at the communicated SPT deadline, which is aligned with market expectations.

Information reported:

- limited assurance
- reasonable assurance
- Other (*please specify*):

Frequency:

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

Material change:

- Perimeter
- SPTs calibration
- KPI methodology

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For more information, visit www.sustainalytics.com

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Named
2015: Best SRI or Green Bond Research or Rating Firm
2017, 2018, 2019: Most Impressive Second Opinion Provider

