Second-Party Opinion

STT GDC Pte Ltd
Sustainability-Linked Financing Framework

Second-Party Opinion
Reviewed by:
MORNINGSTAR | SUSTAINALYTICS

Evaluation Date	August 27, 2024[1]
Issuer Location	Singapore

Evaluation Summary

Sustainalytics is of the opinion that the STT GDC Pte Ltd Sustainability-Linked Financing Framework aligns with the Sustainability-Linked Bond Principles 2023 and the Sustainability-Linked Loan Principles 2023. This assessment is based on the following:

- **Selection of Key Performance Indicators** The STT GDC Pte Ltd Sustainability-Linked Financing Framework defines three KPIs: i) Percentage of renewable energy in total electricity consumption; ii) Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue); and iii) Percentage of data centres certified under recognized green building certification schemes. (see Table 1). Sustainalytics considers KPI 1 to be strong and KPIs 2 and 3 to be adequate based on their materiality, relevance, scope of applicability and comparability to external benchmarks.
- **Calibration of Sustainability Performance Targets** Sustainalytics considers the SPTs to be aligned with STT GDC's sustainability strategy. Sustainalytics further considers SPT 1 and 3 to be ambitious; and SPT 2 to be moderately ambitious based on the comparison with past performance, peer performance and science-based trajectories, as applicable.
- **Financial Characteristics** STT GDC will link the financial characteristics of the sustainability-linked instruments to the achievement of the SPTs. The financial characteristics may include a variation in the coupon rate, redemption price or margin adjustment.
- **Reporting** STT GDC commits to report on its progress on the KPIs on an annual basis in its ESG report which will be published on its website. STT GDC further commits to disclose relevant information enabling investors to monitor the level of ambition of the SPTs.
- **Verification** STT GDC commits to have external limited assurance conducted against each SPT for each KPI at least once a year and publish the verification report on its website.

The SPTs contribute to the following SDGs:

Overview of KPIs and SPTs

KPI	Baseline	Strength of KPI	SPT	Ambitiousness of SPT
KPI 1: Percentage of renewable energy in total electricity consumption	2021	Strong	SPT 1: Increase the percentage of renewable energy in total electricity consumption to 85% by 2028	Ambitious
KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)		Adequate	SPT 2: Reduce scope 1 and 2 carbon intensity by 70% by 2028	Moderately Ambitious
KPI 3: Percentage of data centres certified under recognized green building certification schemes		Adequate	SPT 3: Increase the percentage of data centres certified under recognized green building certification schemes to 65% by 2028	Ambitious

[1] This Second-Party Opinion updates the Second-Party Opinion of July 2022.

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Scope of Work and Limitations

ST Telemedia Global Data Centres ("STT GDC" or the "Group")[2] has engaged Sustainalytics to review the STT GDC Pte Ltd Sustainability-Linked Financing Framework dated August 2024 (the "Framework") and provide an opinion on its alignment with the Sustainability-Linked Bond Principles 2023 (SLBP)[3] and the Sustainability-Linked Loan Principles 2023 (SLLP).[4]

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent[5] opinion on the alignment of the Framework with the SLBP, as administered by the International Capital Market Association (ICMA) and SLLP, as administered by the Asia Pacific Loan Market Association (APLMA), the Loan Market Association (LMA) and the Loan Syndications and Trading Association (LSTA). As part of this engagement, Sustainalytics exchanged information with various members of STT GDC's management team to understand the sustainability impact of their business processes and SPTs, as well as the reporting and verification processes of aspects of the Framework. STT GDC representatives have confirmed that:

(1) They understand it is the sole responsibility of the Group 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 STT GDC. Sustainalytics' Second-Party Opinion assesses alignment of the Framework with current market standards but does not provide any guarantee of alignment nor warrants any alignment with future versions of such standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated SPTs of KPIs but does not measure KPI performance. The measurement and reporting of the KPIs and SPTs is the responsibility of the issuer. This Second-Party Opinion is valid for issuances aligned with the Framework until one of the following occurs: i) a material change to the external benchmarks against which targets were set; ii) 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 the KPIs.

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 STT GDC has made available to Sustainalytics for the purpose of this Second-Party Opinion.

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[2] The STT GDC group of companies comprises STT GDC Pte Ltd (the parent company registered in Singapore) and its subsidiary companies but excludes associated companies and joint ventures.
[3] The Sustainability-Linked Bond Principles are administered by the International Capital Market Association and are available at: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/
[4] The Sustainability-Linked Loan Principles are administered by the Loan Syndications and Trading Association and are available at: https://www.lsta.org/content/sustainability-linked-loan-principles-sllp/
[5] 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.

Introduction

STT GDC is a global data centre provider founded in 2014 and headquartered in Singapore. The Group has more than 95 data centres[6] with a combined IT load of over 1.7 GW, located in Singapore, UK, Germany, India, Thailand, South Korea, Indonesia, Japan, Philippines, Malaysia and Vietnam. STT GDC provides colocation facilities, connectivity solutions and support services.

STT GDC intends to issue sustainability-linked financing instruments, such as bonds including perpetual bonds,[7] loans, commercial papers, derivatives[8] and other financial instruments[9] whose coupon rate, redemption price or margin adjustment are tied to the achievement of sustainability performance targets for three KPIs related to renewable energy, GHG emissions intensity and data centres obtaining green building certification schemes. The scope of all three KPIs covers STT GDC and its subsidiaries over which STT GDC has operational control.[10]

STT GDC has engaged Sustainalytics to review the Framework and provide an opinion on the alignment of the Framework with the Sustainability-Linked Bond Principles 2023 and the Sustainability-Linked Loan Principles 2023. The Framework has been published in a separate document.[11]

STT GDC has defined the following KPIs and SPTs:

Table 1: KPI Definitions

KPI	Definition
KPI 1: Percentage of renewable energy in total electricity consumption	The KPI measures the proportion of renewable energy consumption (in MWh) in the total electricity consumption of STT GDC's portfolio during a calendar year. STT GDC defines renewable energy as: i) on-site (including behind-the-meter) installations; ii) off-site installations; iii) green tariff or plan from utility providers; iv) physical power purchase agreements (PPAs); virtual power purchase agreements (VPPAs); and v) electricity, regardless of fuel mix, which has been matched with the purchase equivalent energy attribute certificates (EAC)[12] either bundled[13] or unbundled.[14] The sources of renewable energy will include solar, wind, hydroelectric, geothermal, ocean, wave or tidal, and green hydrogen.
KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)	The KPI measures the ratio of scope 1 and 2 GHG emissions per unit of consolidated revenue on an annual basis. The ratio is calculated as follows: $\text{Carbon intensity} = \frac{tCO_2e}{\text{Revenue in SGD million}}$

[6] Data centre figures include sites under development and held for future development.
[7] For perpetual bonds, STT GDC has confirmed that the sustainability-linked perpetuals have a non-call date in 2030 until the maturity date of the bond.
[8] Sustainalytics notes that derivatives are not administered by ICMA or LMA currently and hence are not considered under the scope of this Second-Party Opinion.
[9] Sustainalytics has reviewed only the financial instruments that are specified in the Framework. STT GDC has communicated to Sustainalytics that i) only debt instruments (including perpetual bonds) will be issued under the Framework; and ii) all instruments issued or obtained under the Framework will also have a maturity period of at least one year, and the SPTs will be calibrated towards the relevant maturity for short-term instruments, taking into account STT GDC's decarbonization goals and projected growth of the Group, which may not follow a linear trajectory.
[10] Operational control is defined by STT GDC as those subsidiaries where STT GDC has more than a 50% equity stake. STT GDC is presently operational in Singapore, India, UK, and Indonesia. Other markets expected to be operational in the coming years include Malaysia, South Korea, Japan, Vietnam and Germany.
[11] STT GDC, "Sustainability-Linked Financing Framework", at: https://www.sttelemediagdc.com/sg-en/esg/slff
[12] EACs include renewable energy certificates (RECs), international renewable energy certificates (I-REC) and renewable energy guarantees of origin certificates (REGOs).
[13] For bundled EACs, STT GDC communicated to Sustainalytics that the shortest term of these instruments in its portfolio is a three-year contract with an option to renew for six years. Sustainalytics notes that it is good practice to purchase EACs on a bundled basis for a longer maturity of at least 5 years.
[14] STT GDC has confirmed to Sustainalytics that unbundled EACs will be retired within a year. Sustainalytics notes that it is good practice that unbundled EACs be held until bond or loan maturity.

	Scope 1 and 2 market-based emissions[15] are calculated as per the GHG Protocol Corporate Accounting and Reporting Standard[16] and this figure is quantified in tonnes of carbon dioxide equivalent emissions (tCO_2e). Scope 1 GHG emissions include direct emissions from STT GDC's controlled operations and comprise emissions from diesel consumption for backup generators and refrigerants. Scope 2 GHG emissions include indirect emissions from purchased electricity. Reported annual revenue figures are extracted from STT GDC's financial statements quantified in SGD millions.
KPI 3: Percentage of data centres certified under recognized green building certification schemes	The KPI represents the percentage of data centres that have achieved or are expected to achieve at least one of the following green building certifications and green data centre standard levels among all operational data centres of STT GDC and its subsidiaries: a) BCA Green Mark: GoldPlus or Platinum[17] b) SS 564 Sustainable Data Centres[18] c) BREEAM: Excellent or Outstanding[19] d) LEED: Gold or Platinum[20] e) CEEDA: Silver or Gold[21] f) CASBEE: A or S[22] g) DGNB: Gold or Platinum[23] h) NABERS: 4.5 stars or above[24] i) IGBC: Gold or Platinum[25] The KPI is calculated as follows: The percentage of data centres that have received or are expected to receive at least one of the listed green building certifications out of the total number of operational data centres of STT GDC and its subsidiaries.

[15] Market-based emissions reflect emissions from electricity that companies have purposefully chosen, including energy attribute certificates and direct contracts.
Greenhouse Gas Protocol, "GHG Protocol Scope 2 Guidance", (2015), at:
https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf
[16] Greenhouse Gas Protocol, "A Corporate Accounting and Reporting Standard", (2004), at:
https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf
[17] BCA Green Mark: https://www1.bca.gov.sg/buildsg/sustainability/green-mark-certification-scheme
[18] SS 564: https://www.imda.gov.sg/regulations-and-licensing-listing/ict-standards-and-quality-of-service/it-standards-and-frameworks/green-data-centre-standard
[19] BREEAM: https://breeam.com/about/
[20] LEED: https://www.usgbc.org/leed
[21] CEEDA: https://www.datacenterdynamics.com/en/ceeda/
[22] CASBEE: https://www.ibecs.or.jp/CASBEE/english/basicconceptE.htm
[23] DGNB: https://www.dgnb-system.sde/en/system/
[24] NABERS: https://www.nabers.gov.au/about/what-nabers
[25] IGBC: https://igbc.in/igbcratingsystems

Table 2: SPTs[26] and Past Performance[27]

KPI	2020	2021 (baseline)	2022	2023	SPT 2028
KPI 1: Percentage of renewable energy in total electricity consumption	43%	44%	52%	62.5%	SPT 1: Increase the percentage of renewable energy in total electricity consumption to 85% by 2028
KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)	(678)	12% (597)	25% (448)	46% (325)	SPT 2: Reduce scope 1 and 2 carbon intensity by 70% by 2028 (179 tCO_2e/SGD million revenue)
KPI 3: Percentage of data centres certified under recognized green building certification schemes	40%	38.7%	44.1%	48.6%	SPT 3: Increase the percentage of data centres certified under recognized green building certification schemes to 65% by 2028

[26] For any sustainability-linked loans obtained under the Framework, STT GDC will agree bilaterally with relevant lenders and decide on the inclusion of any necessary annual target observation dates. Sustainalytics notes that the SLLP recommend that at least an annual SPT be set per KPI for each year of the loan term.

[27] The historical performance data (2020-2023) pertains to STT GDC and the subsidiaries where STT GDC has operational control in the following countries (as of 31 December 2023): Singapore, India, UK, and Indonesia.

Sustainalytics' Opinion

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

Sustainalytics is of the opinion that the Framework aligns with the five core components of the SLBP and SLLP.

Selection of Key Performance Indicators

Relevance and Materiality of KPIs

In assessing the materiality and relevance of a KPI, Sustainalytics considers: i) whether the indicator speaks to a material impact of the issuer's activities on environmental or social issues; and ii) to what extent the KPI is applicable.

KPI 1: Percentage of renewable energy in total electricity consumption

KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)

Sustainalytics assessed KPIs 1 and 2 jointly because they collectively address the issue of GHG emissions.

Data centres use significant amounts of electricity due to the use of energy-intensive technologies and services, such as servers, storage equipment, backup power and cooling infrastructure.[28] The electricity demand of data centres reached an estimated maximum of 340 TWh in 2022 globally, representing approximately 1-1.3% of the world's electricity use.[29, 30] In addition, data centres and data transmission networks are responsible for 1% of energy-related GHG emissions.[31] These statistics highlight the strategic importance of continued implementation of energy efficiency plans and expanding the use of renewable electricity for the decarbonization of the ICT sector.[32] Sustainalytics' ESG Risk Rating identifies "Carbon – Own Operations" as a material ESG issue (MEI) for the software and services industry primarily because of the carbon footprint associated with data centre infrastructure. [33] Additionally, the Sustainability Accounting Standards Board (SASB) identifies Energy Management as a relevant topic to track and disclose for the software & IT services industry.[34]

In terms of applicability, Sustainalytics notes that KPIs 1 and 2 collectively address scope 1 and 2 GHG emissions of all operating data centres of STT GDC and its subsidiaries. Sustainalytics notes that the Group is currently in the process of measuring its total scope 3 GHG emissions and in the absence of this information, has considered the industry average of scope 3 emissions to assess applicability. According to this assessment, scope 1 emissions represent 0.2-0.5% of the total carbon footprint of data centre operators, scope 2 emissions represent 31-61% and scope 3 emissions represent 38-69%.[35] Various factors influence the carbon footprint of data centres significantly, especially scope 2 emissions; these factors include location, grid emission factors, data centre

[28] Copenhagen Centre on Energy Efficiency, "Data Centres: Digitalization Powerhouse and Energy Efficiency Potential", (2020), at: https://unepccc.org/wp-content/uploads/sites/3/2020/10/data-centres-digitalisation-powerhouse-and-energy-efficiency-potential-en.pdf
[29] International Energy Agency, "Data Centers and Data Transmission Networks", (2022), at: https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks
[30] This excludes energy used for cryptocurrency mining, which was which was estimated to be 110 TWh in 2022, accounting for 0.4% of annual global electricity demand.
[31] IEA, "Data Centres and Data Transmission Networks", at: https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks
[32] Science Based Targets initiative, "Guidance for ICT Companies Setting Science Based Targets", at: https://sciencebasedtargets.org/resources/legacy/2020/04/GSMA_IP_SBT-report_WEB-SINGLE.pdf
[33] Sustainalytics, "Software and Services Industry Report", (2023)
[34] SASB, "Software & IT Services", at: https://sasb.ifrs.org/standards/materiality-finder/find/?industry%5b%5d=TC-SI&lang=en-us
[35] Schneider Electric, "Demystifying Data Centre Scope 3 Carbon with Our Findings", (2023), at: https://blog.se.com/datacenter/2023/07/11/demystifying-data-center-scope-3-carbon-with-our-findings/

capacity, load factor and cooling systems.[36] Based on the above findings and the energy-intensive nature of data centres, Sustainalytics considers KPIs 1 and 2 to have a sufficient scope of applicability.[37]

Based on the above, Sustainalytics considers KPIs 1 and 2 to be relevant and material and to have a sufficient scope of applicability.

KPI 3: Percentage of data centres certified under recognized green building certification schemes

In addition to significant electricity consumption, data centres are also resource intensive, such as water for cooling requirements. Buildings play a crucial role in the transition towards a low-carbon economy due to their significant energy consumption, which makes them a major source of GHG emissions, accounting for 37% of energy-related CO_2 emissions globally in 2021.[38] The selected building certification schemes, such as LEED and BREEAM, capture and evaluate data centre sustainability performance on aspects such as energy efficiency, water efficiency, waste management, site ecology and indoor environmental quality during construction and operation stages.

In terms of applicability, the KPI covers all operating data centres of STT GDC and its subsidiaries, therefore, Sustainalytics considers the KPI to have a high scope of applicability.

Based on the above, Sustainalytics considers KPI 3 to be relevant and material and to have a high scope of applicability.

KPI Characteristics

In assessing a KPI's characteristics, Sustainalytics considers: i) whether it uses a clear and consistent methodology; ii) whether it follows an externally recognized definition; iii) whether the KPI is a direct measure of the issuer's performance on a material environmental or social issue;[39] and iv) whether the methodology can be compared against an external contextual benchmark.[40]

KPI 1: Percentage of renewable energy in total electricity consumption

Sustainalytics considers STT GDC's definition and methodology to calculate KPI 1 to be clear given the ease of calculation and replicability, and its consistency with the Group's historical reporting on this KPI since 2020. The KPI is indirectly linked to STT GDC's environmental performance because it measures the percentage of renewable energy consumed over total energy, which is an indirect measure of the underlying environmental issue of GHG emissions. Considering that the KPI measures the share of renewable energy consumption, Sustainalytics notes that the KPI supports benchmarking against external science-based decarbonization pathways, such as the SBTi's renewable electricity criteria, which is aligned with RE100 recommendations.[41, 42]

KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)

Sustainalytics considers STT GDC's definition and methodology to calculate KPI 2 to be clear and consistent with the Group's historical reporting on this KPI since 2020. STT GDC calculates scope 1 and scope 2 GHG emissions according to the GHG Protocol Standard.[43] In addition, STT GDC uses the annual revenue figures from its financial statements as a divisor (See Table 1: Definitions). Sustainalytics considers that the KPI provides an indirect measure of the Group's GHG emissions performance given that emissions intensity is expressed per unit of revenue, a metric whose variability may be influenced by financial or commercial factors unrelated to the Group's emissions performance, making the outcome potentially volatile. Sustainalytics views the use of a revenue-based

[36] Schneider Electric, "Demystifying Data Centre Scope 3 Carbon with Our Findings", (2023), at: https://blog.se.com/datacenter/2023/07/11/demystifying-data-center-scope-3-carbon-with-our-findings/
[37] Sustainalytics defines sufficient scope of applicability when the applicability accounts to at least 30% for a KPI that indirectly addresses a material issue.
[38] UN Environment Programme, "Global Status Report for Buildings and Construction", (2022) at: https://globalabc.org/sites/default/files/inline-files/2022%20Global%20Status%20Report%20for%20Buildings%20and%20Construction_0.pdf
[39] A direct measure refers to a metric selected for the KPI that shows a specific indicator of performance or an outcome on the material ESG issue.
[40] External contextual benchmarks are standards or points of reference established by recognized third-party organizations to facilitate comparability.
[41] Science Based Targets initiative, "SBTi Criteria and Recommendations for Near-Term Targets", (2023), at: https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf
[42] RE100, "Frequently Asked Questions (FAQs): Technical", (2022), at: https://www.there100.org/sites/re100/files/2024-02/RE100%20FAQs%20-%20Feb%202024.pdf
[43] Greenhouse Gas Protocol, "A Corporate Accounting and Reporting Standard", at: https://ghgprotocol.org/corporate-standard

intensity metric as relevant and useful for STT GDC to give a relative comparison aligned with its growth trajectory, given that STT GDC plans to expand its business operations,[44] although Sustainalytics notes that the market favours the use of a unit of production, such as gigabytes processed, as a denominator in an intensity metric for the sector. Furthermore, Sustainalytics notes that there are no external contextual benchmarks currently available to assess progress on the KPI over the bond or loan period.

KPI 3: Percentage of data centres certified under recognized green building certification schemes

Sustainalytics considers STT GDC's definition and methodology to calculate KPI performance to be clear and consistent given the ease of calculation and replicability, and based on the selected credible green building certification schemes and green data centre standards that take PUE into consideration.[45] In addition, Sustainalytics considers the KPI to be indirect, given that the KPI measures the sustainability performance of the Group's data centres against the selected green building certification schemes, which is an indirect indicator of energy, water use and environmental performance of data centres. Furthermore, Sustainalytics notes that there are no external contextual benchmarks currently available to assess progress on the KPI over the bond or loan period.

Overall Assessment

Sustainalytics considers KPI 1 to be strong given that: i) it is an indirect measure of the Group's performance on a relevant and material environmental issue; ii) it has a sufficient scope of applicability in combination with KPI 2; iii) it follows a clear and consistent methodology that is externally defined; and iv) it supports benchmarking against external science-based trajectories.

Sustainalytics considers KPI 2 to be adequate given that: i) it is an indirect measure of the Group's performance on a relevant and material environmental issue; ii) it has a sufficient scope of applicability in combination with KPI 1; iii) it follows a clear and consistent methodology that is externally defined; and iv) it does not lend itself to be benchmarked against science-based trajectories.

Sustainalytics considers KPI 3 to be adequate given that: i) it is an indirect measure of the Group's performance on a relevant and material environmental issue; ii) it has a high scope of applicability; iii) it follows a clear and consistent methodology; and iv) does not lend itself to be benchmarked against external science-based trajectories.

KPI	Strength of KPI			
KPI 1: Percentage of renewable energy in total electricity consumption	Not Aligned	Adequate	Strong	Very strong
KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)	Not Aligned	Adequate	Strong	Very strong
KPI 3: Percentage of data centres certified under recognized green building certification schemes	Not Aligned	Adequate	Strong	Very strong

[44] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf
[45] STT GDC has confirmed to Sustainalytics that most of the building certifications listed by STT GDC under KPI 3 address the performance of the envelope of the buildings hosting data centres, but not necessarily the performance of the data centres themselves. However, the list includes building certifications that have data centre specific standards which address the performance of the data centre in sector specific metrics such as PUE.

Calibration of Sustainability Performance Targets

Alignment with STT GDC's Sustainability Strategy

STT GDC has set the following SPTs for its KPIs:

- SPT 1: Increase the percentage of renewable energy in total electricity consumption to 85% by 2028 from a 2021 baseline
- SPT 2: Reduce scope 1 and 2 carbon intensity by 70% by 2028 from a 2021 baseline
- SPT 3: Increase the percentage of data centres certified under recognized green building certification schemes to 65% by 2028 from a 2021 baseline

STT GDC aims to decarbonize its operations and become carbon neutral by 2030. STT GDC has set out Group-wide emissions reduction initiatives to achieve its targets related to GHG emissions from its operations. Primarily, such initiatives include: i) using renewable electricity; ii) tracking and benchmarking PUE to manage energy usage; iii) utilizing AI–driven systems and advanced sensors to monitor and ensure optimal power efficiency; iv) using innovative liquid cooling systems to enhance energy efficiency in data centres; and v) obtaining credible green building certification for all newly developed data centres under the Group's operational control.[46]

Overall, Sustainalytics views the SPTs to be in line with STT GDC's broader sustainability goals. Please refer to Section 2 for an analysis of the credibility of STT GDC's sustainability strategy.

Strategy to Achieve the SPTs

STT GDC intends to achieve SPT 1 through the following strategy:

- On-site and off-site installation of renewable energy technologies, including solar, wind, hydroelectric, geothermal, ocean, wave or tidal, and green hydrogen.
- Procurement of renewable energy through PPAs, VPPAs, the purchase of equivalent bundled or unbundled energy attribute certificates (EACs)[47,48] and utility programmes, such as utility green tariffs.
- In India, STT GDC has partnered with renewable energy providers to develop new solar and wind farms with a total capacity exceeding 155 MW. STT GDC aims to use renewable energy in its data centres through long-term PPAs, where possible. By developing new renewable energy projects, STT GDC will add capacity to the grid rather than relying on existing renewable resources, contributing to the expansion of renewable energy infrastructure in India.

STT GDC intends to achieve SPT 2 through the following strategy:

- STT GDC intends to increase the share of renewable energy use across its operations and implement energy efficiency measures to reduce the use of diesel fuel. In addition, STT GDC intends to purchase carbon offset credits certified by Gold Standard or Verified Carbon Standard for residual hard-to-abate emissions.
- STT GDC has confirmed to Sustainalytics that carbon offsets will account for a maximum of 10% of its total scope 1 and 2 carbon intensity reduction. Sustainalytics notes that issuers are expected to set targets

[46] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf
[47] EACs include renewable energy certificates (RECs), international renewable energy certificates (I-REC), renewable energy guarantees of origin certificates (REGOs).
[48] STT GDC communicated to Sustainalytics that its renewable energy portfolio includes short-term bundled and unbundled EACs. Sustainalytics notes that it is good practice to purchase EACs on a bundled basis for a longer maturity of at least 5 years and that unbundled EACs be held until bond maturity or loan maturity. In addition, STT GDC has communicated to Sustainalytics that due to the uncertainties in the availability of high-quality renewables and potential changes in renewable energy procurement requirements, particularly in the new markets where the grid is highly carbon intensive and the renewable energy markets are still nascent, it would be challenging to determine the percentage of RECs that will be obtained. Further, STT GDC communicated that it remains committed to prioritising the sourcing of high-quality renewable energy, depending on solutions available in the respective countries in the following order of priority: a) self-generation; b) retail supply contracts or PPAs; c) EACs or RECs.

based on emission reductions through direct action within their own boundaries or their value chains, and that offsets should only be considered as an option beyond the SPTs. Sustainalytics views STT GDC's reliance on the use of offsets to be a limitation of its strategy to achieve the SPT. In this regard, STT GDC intends to use offsets as part of its strategy because of the lack of available renewable energy options in certain markets to power its data centres, among other reasons. STT GDC has clarified to Sustainalytics that on-site renewable energy generation is part of its strategy to achieve SPT 2. Sustainalytics encourages STT GDC to prioritize such options to reduce its reliance on carbon offsets for the achievement of the SPT.

- STT GDC will partner with infrastructure providers focused on graphics processing units (GPU) providing AI workloads and deploying innovative liquid cooling systems to enhance energy efficiency in its data centres. STT GDC also intends to engineer new, flexible colocation products designed to support its customers' GPU rollouts.
- In 2023, STT GDC initiated a pilot project to use AI to optimize cooling efficiency in selected data centres in Singapore to improve its overall PUE and GHG emissions. STT GDC intends to deploy similar AI in the data centres in its portfolio, where feasible.
- STT GDC will monitor and measure power consumption to identify energy reduction opportunities and also aims to adhere to stringent energy management systems across its data centres to reduce its environmental footprint.

STT GDC intends to achieve SPT 3 through the following strategy:

- STT GDC intends to include applicable green building certification standards during the design phase of each new data centre building.
- STT GDC will create budget provisions and appoint green data centre experts to facilitate the certification process.
- The Group intends to undertake regular reviews on the possibility of retrospective certification for existing data centres.

Ambitiousness, Baseline and Criteria

To determine the ambitiousness of an SPT, Sustainalytics considers: i) whether the SPT goes beyond a business-as-usual trajectory; ii) how the SPT compares to targets set by peers; and iii) how the SPT compares with science-based trajectories.[49]

STT GDC has set the baselines for the SPTs as 2021 to align with its publicly disclosed Group-level targets and the baseline used in the 2022 Sustainability-Linked Financing Framework.

SPT 1: Sustainalytics was able to use the following criteria to assess ambitiousness: past performance, peer performance and science-based trajectories.

Regarding past performance, Sustainalytics notes that power consumption from renewable sources increased by approximately 6.67 percentage points per annum between 2020 and 2023. To achieve SPT 1, which represents 85% power consumption from renewable sources by 2028 from a 2021 baseline, STT GDC must increase power consumption from renewable sources by approximately 5.86 percentage points per annum between 2021 (baseline) and 2028 and 4.40 percentage points per annum between 2023 (the most recent year of reporting) and 2028. STT GDC has communicated to Sustainalytics their expanded footprint in key markets such as Malaysia, Vietnam, Indonesia, South Korea, Japan and Germany, which creates increased challenges to sourcing renewable energy. Further, STT GDC has also shared with Sustainalytics the forecasted electricity consumption in 2028 for each of the countries where STT GDC operates: i) UK and EU (Germany): 3,100 GWh; ii) Southeast Asia (Singapore, Indonesia, Malaysia, Vietnam): 2,400 GWh; iii) South Asia (India): 3,400 GWh and East Asia (Japan, South Korea): 700 GWh. Sustainalytics notes that renewable energy markets and infrastructure in ASEAN (Malaysia, Vietnam and Indonesia) and India are still in the early stages of development due to high costs, inadequate policy and investment frameworks, lagging scale of deployment and underdevelopment of supply chains.[50,51] Based on the

[49] We refer here to contextual benchmarks that indicate the alignment of targets with ecosystem boundaries.
[50] IEA, "ASEAN Renewables: Opportunities and Challenges", (2023), at: https://iea.blob.core.windows.net/assets/057bafda-0c09-40fe-934c-4f2fe5e080f4/ASEANRenewables_InvestmentOpportunitiesandChallenges.pdf
[51] Swasti Raizada, Deepak Sharma, Tara Laan, Saumya Jain, "Mapping India's Energy Policy", Published 2023, IISD, at: https://www.iisd.org/story/mapping-india-energy-policy-2023/

above, Sustainalytics considers SPT 1 to represent a continuous material improvement and the targeted performance requires addressing new challenges of sourcing renewable energy in the geographies highlighted above.

Sustainalytics analyzed the performance of seven peers that are data centre providers within the broader software and services industry. Sustainalytics notes that STT GDC's target exceeds the target set by two peers and is aligned with the targets set by four peers. In addition, the Group's target is considered lower than one peer since it has already reached 96% of renewable energy use across its portfolio and would reach 100% utilization sooner than STT GDC. Overall, Sustainalytics considers SPT 1 to be aligned with peer performance.

The SBTi's criteria and recommendations for near-term targets identify a threshold of 80% for renewable electricity procurement by 2025 and 100% by 2030 to stay on track to meet the 1.5°C climate scenario to reduce scope 2 GHG emissions targets, aligned with the RE100 initiative.[52,53] The SPT represents achieving 85% by 2028 from a 2021 baseline. Therefore, Sustainalytics notes that SPT 1 does not align with the science-based references.

SPT 2: Sustainalytics was able to use the following criteria to assess ambitiousness: past performance, peer performance.

Regarding past performance, Sustainalytics notes that STT GDC reduced its scope 1 and 2 GHG emissions intensity by an average annual reduction of approximately 17.35% between 2020 and 2023. STT GDC confirmed to Sustainalytics that the sharp decline in emissions intensity is linked to a significant revenue increase coupled with steady absolute emissions reduction achieved by increasing the use of renewable electricity. To achieve SPT 2, which represents a 70% reduction in emissions intensity by 2028, STT GDC must reduce GHG emissions intensity by 10% between 2021 (baseline) and 2028 and 9% between 2023 (the most recent year of reporting) and 2028. Hence, Sustainalytics considers SPT 2 to be below historical performance. Given the intensity metric based on revenue, Sustainalytics validates emissions reduction in absolute terms to ensure that the metric represents a sustainability performance improvement. Sustainalytics notes that achievement of the SPT may be influenced by factors unrelated to the Group's emissions performance and, therefore, may not lead to emissions reduction in absolute terms, thus not a significant sustainability improvement. Therefore, Sustainalytics considers the SPT to represent a continuous material improvement if its achievement leads to absolute emissions reduction.

Sustainalytics analyzed the performance of seven peers that are data centre providers within the broader software and services industry. Sustainalytics notes that three peers have not set emissions reduction targets and the other four peers have set either absolute emissions reduction targets or emissions intensity targets measured in tCO_2e/sq. ft. Additionally, three of these four peers have had their near-term targets validated by the SBTi for alignment with the 1.5°C scenario. Sustainalytics notes that the direct comparison of SPT 2 against peers' targets is limited, due to variations in the reported emissions metrics. Based on this, Sustainalytics considers SPT 2 to be in line with similar decarbonization targets set by peers.

Regarding comparisons with science-based trajectories, Sustainalytics is of the opinion that relevant contextual benchmarks are not available and as such SPT 2 cannot be compared against any external trajectories.

SPT 3: Sustainalytics was able to use the following criteria to assess ambitiousness: past performance, peer performance.

Regarding past performance, between 2020 and 2023, STT GDC increased the percentage of green data centres by 2.87 percentage points per annum. SPT 3 represents achieving 65% of data centres certified as green buildings by 2028 from a 2021 baseline, requiring an increase of 3.76 percentage points per annum from 2021 to 2028 and 3.28 percentage points per annum from 2023 (the most recent year of reporting) to 2028. Hence, Sustainalytics notes that SPT 3 is above historical performance since it represents a continuous material improvement.

Sustainalytics analyzed the performance of seven peers that are data centre providers within the broader software and services industry. Sustainalytics notes that three peers have set broader long-term goals for green building certifications. However, it is notable that none of the three peers have set any specific and time-bound targets, with two of the peers also pursuing less ambitious certification levels than STT GDC.[54] The other four peers did

[52] Science Based Targets initiative, "SBTi Corporate Net- Zero Standard", (2024), at:https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf

[53] RE100 Climate Group, "Frequently asked questions", at: https://www.there100.org/sites/re100/files/2022-04/RE100%20FAQs%20-%20April%202022%20update_0.pdf

[54] The remaining peer did not specify the certification levels for the green building certifications they are pursuing.

not set any goals for green building certifications. Overall, Sustainalytics considers SPT 3 to be above peer performance.

Regarding comparisons with science-based trajectories, Sustainalytics is of the opinion that SPT 3 cannot be compared against external trajectories.

Overall Assessment

Sustainalytics considers the SPTs to align with STT GDC's sustainability strategy.

Sustainalytics considers SPT 1 to be ambitious given that: i) it represents a continuous material improvement and the targeted performance requires addressing new challenges of sourcing renewable energy in the ASEAN regions and India; ii) it is aligned with peer performance; but iii) it does not meet the SBTi's threshold for renewable electricity procurement to reduce scope 2 GHG emissions.

Sustainalytics considers SPT 2 to be moderately ambitious given that: i) it is below historical performance; ii) it is aligned with peer performance; but iii) it cannot be compared against external trajectories.

Sustainalytics considers SPT 3 to be ambitious given that: i) it is above historical performance; ii) it is above peer performance; but iii) it cannot be compared against external trajectories.

SPT	Ambitiousness of SPT			
SPT 1: Increase the percentage of renewable energy in total electricity consumption to 85% by 2028	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
SPT 2: Reduce scope 1 and 2 carbon intensity by 70% by 2028	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
SPT 3: Increase the percentage of data centres certified under recognized green building certification schemes to 65% by 2028	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious

Financial Characteristics

STT GDC intends to issue sustainability-linked financial instruments (bonds, including perpetual bonds, loans, commercial papers, derivatives and other financial instruments) that will be linked to the achievement of the SPTs in the form of a variation in the coupon rate, redemption price or margin adjustment. STT GDC has disclosed that the financial characteristics of the sustainability-linked instruments will be specified in the relevant transaction documents. The pre-issuance document will also describe the following details: i) fallback mechanisms in case the SPTs cannot be calculated or observed in a satisfactory manner; and ii) potential exceptional events or extreme events that could substantially affect the calculation of the SPTs, where applicable.

Sustainalytics notes that STT GDC can execute multiple sustainability-linked instruments under the Framework. STT GDC has further confirmed that all KPIs are available for selection in future issuances, and the final choice of KPIs will be determined based on discussions with its bankers and investors. All SPTs will also be individually assessed based on the KPIs included in any issuance. Sustainalytics considers the financial characteristics of the sustainability-linked financial instruments to be aligned with the SLBP and SLLP but does not opine on the adequacy of the magnitude and structure of the financial penalty.

Reporting

STT GDC commits to report on an annual basis on its progress on the KPIs and expects to include the relevant figures in its ESG Report, which will be published on STT GDC's website. STT GDC further commits to disclose relevant information in the report, which may include: i) up-to-date information on the progress of the KPIs and performance against the SPTs by the respective target observation date for each issuance, or a description of the main factors if the SPTs could not be achieved by the respective target observation date. STT GDC has confirmed that a sustainability performance certificate attached to the verification information will be provided to lenders. The reporting commitments are aligned with the SLBP and SLLP.

Verification

STT GDC commits to have an external verifier provide limited assurance against each SPT for each KPI at least once a year. The verification report will be published on the Group's website. The verification commitments are aligned with the SLBP and SLLP.

Section 2: Assessment of STT GDC's Sustainability Strategy

Credibility of STT GDC's Sustainability Strategy

STT GDC has developed an ESG framework and strategy focusing on three goals: i) carbon-neutral data centre operations by 2030; ii) a safe, secure, diverse and inclusive workplace; and iii) ethical and responsible operations.[55] STT GDC has a dedicated Group ESG Working Committee, which comprises global representatives from key functions to oversee the implementation of sustainability initiatives with oversight of STT GDC's board of directors and the Risk, Operations and Sustainability Committee.[56]

In 2023, STT GDC conducted a materiality assessment, which identified climate change and energy as one of its critical material issues.[57] To address this material issue, STT GDC aims to decarbonize its operations and become carbon neutral by 2030. STT GDC has also committed to achieving the following interim environmental targets: i) 60% of its energy use to come from renewable energy by 2026; ii) 40% reduction in carbon intensity by 2026 from a 2021 baseline; iii) 10% improvement in PUE by 2025 from a 2020 baseline; and iv) have 55% of its data centres certified under recognized green building certifications by 2026.[58] In relation to renewable energy use, STT GDC has met its 2026 target in 2023 of 60%, having renewable energy account for 62.5% of its total energy consumption, by tapping on onsite renewable energy generation, green tariffs, PPAs and EACs.[59] For carbon intensity, STT GDC reported a 45.6% reduction in carbon intensity in 2023, ahead of its 2026 target of 40%. This is in line with an 8.9% year-on-year reduction in emissions in 2023, despite an increase in energy consumption and the number of operational data centres. To reduce its absolute scope 1 and 2 emissions, STT GDC has adopted measures such as investments in renewable energy projects.[60] Regarding PUE, STT GDC has attained a 9.5% reduction of PUE in 2023 against a 2020 baseline (on track to meet its 2025 target of 10%) by adopting new solutions, including hardware and software optimization driven by artificial intelligence, as well as innovative liquid cooling systems.[61] For green buildings, 48.6% of STT GDC's data centres obtained recognized green building certifications as of 2023.[62] To further reduce its environmental impact, STT GDC incorporates decarbonization considerations from a life cycle perspective, including the selection, designing, building and operating of data centres.[63]

Based on the above, Sustainalytics considers STT GDC to have a credible sustainability strategy and considers that instruments issued under the Framework will further support its sustainability strategy.

STT GDC's Environmental and Social Risk Management

Sustainalytics recognizes that STT GDC's defined targets are impactful, but notes that achieving the SPTs bears environmental and social risks related to carbon-own operations,[64] data privacy and security, occupational health and safety, and supply chain.

Sustainalytics is of the opinion that STT GDC is able to manage or mitigate potential risks through implementation of the following:

- The Group has developed a risk management policy, which provides overarching guidelines to identify, manage and mitigate risks across STT GDC's operations, including environmental and social risks. The policy outlines the practical application of STT GDC's Enterprise Risk Management Framework and the establishment of a strategy to manage its key risks and meet stakeholder expectations.[65]
- Regarding carbon risks in STT GDC's own operations, 100% of STT GDC's data centres in Singapore, UK and Thailand adhere to ISO 50001 for energy management systems,[66] and all data centres in Singapore and Thailand also adhere to SS 564-1 which is Singapore's standard for energy and environmental management systems, specific to data centres.[67,68]
- To manage the data privacy and security risk, STT GDC has established an updated Global Cybersecurity Policy in 2023, which covers global data protection and retention, access control, information security awareness and training, incident

[55] STT GDC, "ESG Report 2022", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2023-12/STT_GDC_ESG_Report_2022_0.pdf
[56] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf
[57] Ibid.
[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] Ibid.
[62] Ibid.
[63] Ibid.
[64] Sustainalytics' MEI Carbon - Own Operations 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.
[65] STT GDC has shared details on its risk management policy with Sustainalytics confidentially.
[66] ISO, "ISO 50001 Energy management", at: https://www.iso.org/iso-50001-energy-management.html
[67] Singapore Standards, "SS564-1:2020 Sustainable data centres - Part 1 : Energy and environmental management systems", at: https://www.singaporestandardseshop.sg/Product/SSPdtDetail/ac609aae-e97c-456f-a7a1-5258a2816b45
[68] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf

management and risk management. STT GDC also carried out training programmes to educate its employees on its cybersecurity policies.[69]

- Regarding occupational health and safety, STT GDC has established an updated set of environmental, health and safety (EHS) frameworks and processes for its employees and contractors in 2023, building upon its initial standards launched in 2021.[70,71] STT GDC has established a Group EHS team responsible for internal audits, assessing the alignment of suppliers' EHS standards with STT GDC's policies, and setting and monitoring EHS key performance indicators.[72] In addition, STT GDC has implemented an EHS management system aligned with ISO 45001 for occupational health and safety management systems,[73] across its operating entities.[74]
- To address environmental and social risks across its supply chain, the Group has established a Supplier Code of Conduct for its business partners and suppliers, which requires them to meet ESG criteria on issues such as business ethics and non-usage of conflict minerals.[75] STT GDC assesses new and existing suppliers against this code, having already screened all suppliers in Asia-Pacific tenders in 2023.[76]

Based on the above, Sustainalytics is of the opinion that STT GDC has implemented adequate measures, and is well-positioned to manage and mitigate environmental and social risks commonly associated with its operations.

Section 3: Impact of the SPTs

The data centre industry is highly energy intensive, which entails significant potential for decarbonization. In 2022, global electricity demand from data centres was estimated at 240-340 TWh,[77] equivalent to 1-1.3% of global electricity use. In addition, data centres and data transmission networks account for 1% of global energy-related GHG emissions.[78] Furthermore, demand for ICT services is expected to continue growing, driven by technologies such as artificial intelligence, virtual reality, 5G, cloud use, machine learning and blockchain.[79] IEA estimates that global electricity demand from data centres could double by 2026 compared to 2022, despite energy efficiency improvements that have helped to limit electricity demand growth.[80,81] Given this context, there is a substantial need for data centres to contribute to meeting the Paris Agreement's target of limiting warming to 1.5°C above pre-industrial levels.

In 2020, the International Telecommunication Union released a decarbonization pathway in line with the Paris Agreement, compelling the ICT sector to reduce its GHG emissions by 45% by 2030 from a 2020 baseline.[82] For data centres, the IEA emphasizes the need for steeper cuts of 50% by 2030 to reach net zero emissions by 2050.[83] The continued implementation of energy efficiency solutions, switching to renewable or low-carbon energy supply and encouraging carbon consciousness among end users are key strategies for decarbonizing the sector and supporting data centre operators in reducing their emissions by 53% between 2020 and 2030, which is needed to align with the SBTi's 1.5°C trajectory for the ICT sector.[84]

[69] Ibid.
[70] STT GDC, "ESG Report 2022", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2023-12/STT_GDC_ESG_Report_2022_0.pdf
[71] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf
[72] Ibid.
[73] ISO, "ISO 45001 Occupational health and safety management systems", at: https://www.iso.org/standard/63787.html
[74] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf
[75] STT GDC, "Supplier Code of Conduct", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-03/STT_GDC_Supplier_Code_of_Conduct_Jan_2023.pdf
[76] STT GDC, "ESG Report 2023", at: https://assets.sttelemediagdc.com/sttgdc/global_en/public/2024-06/STT_GDC_2023_ESG_Report.pdf
[77] This figure excludes the energy used for cryptocurrency mining, which amounted to an estimated 110 TWh in 2022.
[78] IEA, "Data Centres and Data Transmission Networks", (2023), at: https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks
[79] Ibid.
[80] Ibid.
[81] IEA, "Electricity 2024: Analysis and forecast to 2026", (2024), at: https://iea.blob.core.windows.net/assets/6b2fd954-2017-408e-bf08-952fdd62118a/Electricity2024-Analysisandforecastto2026.pdf
[82] International Telecommunication Union, "ICT industry to reduce greenhouse gas emissions by 45 percent 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
[83] IEA, "Data Centres and Data Transmission Networks", (2023), at: https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks
[84] Science Based Targets initiative, "Guidance for ICT Companies Setting Science Based Targets", at: https://sciencebasedtargets.org/resources/legacy/2020/04/GSMA_IP_SBT-report_WEB-SINGLE.pdf

Singapore is a primary data centre hub in Asia, with more than 70 data centres and 1.4 GW of capacity.[85] Data centres account for an estimated 7% of the country's total electricity use in 2020[86] and a projected 12% by 2030.[87] In terms of emissions, data centres account for 82% of the GHG emissions from Singapore's ICT sector.[88] Considering the limited renewable energy options and land constraints, among other challenges to the growth of data centre demand in Singapore, the government placed a moratorium on new data centre construction in 2019,[89] which was lifted in 2022. Since then, however, new sustainable data centre projects must meet the following criteria: i) BCA Green Mark Platinum; ii) a PUE of least 1.3; iii) compliance with best-in-class IT energy efficiency standards; and iv) incorporation of decarbonization efforts such as using renewable or low-carbon energy.[90] These efforts are expected to contribute to the Singapore Government's commitment to reach net zero emissions by 2050.[91]

Based on the above, Sustainalytics is of the opinion that STT GDC's efforts to increase the share of renewable energy in total electricity consumption, reduce its carbon intensity and invest in green data centres are expected to positively contribute to reducing the environmental footprint of its data centres and support the Paris Agreement's goals more broadly.

Contribution to SDGs

The Sustainable Development Goals were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The Framework is expected to help advance the following SDGs and targets:

KPI	SDG	SDG Target
KPI 1: Percentage of renewable energy in total electricity consumption	7. Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency
KPI 2: Scope 1 and 2 carbon intensity (tCO_2e/SGD million revenue)		
KPI 3: Percentage of data centres certified under recognized green building certification schemes	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

[85] Singapore Government, Infocomm Media Development Authority, "Charting green growth pathways at scale for data centres in Singapore", (2024), at: https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/factsheets/2024/charting-green-growth-for-data-centres-in-sg#:~:text=Today%2C%20Singapore%20is%20a%20regional,higher%2Dintensity%20workloads%20for%20AI.
[86] Singapore Ministry of Communications and Information, "MCI response to PQ on data on total carbon emissions by data centres in Singapore", (2021), at: https://www.mci.gov.sg/media-centre/parliamentary-questions/mci-response-pq-data-carbon-emissions-data-centres-sg/
[87] Singapore Government, Infocomm Media Development Authority, "Tropical revolution for data centres", (2016), at: https://www.imda.gov.sg/resources/blog/blog-articles/archived/2016/06/tropical-revolution-for-data-centres
[88] Singapore Government, Infocomm Media Development Authority, "Driving a Greener Digital Future: Singapore's Green Data Centre Roadmap", (2024), at: https://www.imda.gov.sg/-/media/imda/files/how-we-can-help/green-dc-roadmap/green-dc-roadmap.pdf
[89] Singapore Ministry of Trade and Industry, "Written reply to PQ on new data centres", (2021), at: https://www.mti.gov.sg/Newsroom/Parliamentary-Replies/2021/01/Written-reply-to-PQ-on-new-data-centres
[90] Singapore Government, Infocomm Media Development Authority, "Launch of pilot Data Centre – Call for Application ("DC-CFA") to support the sustainable growth of DCs", (2022), at: https://www.imda.gov.sg/resources/press-releases-factsheets-and-speeches/press-releases/2022/launch-of-pilot-data-centre---call-for-application-to-support-sustainable-growth-of-dcs
[91] UNFCCC, "Singapore's Second Update of Its First Nationally Determined Contribution (NDC) AND Accompanying Information", (2022), at: https://unfccc.int/sites/default/files/NDC/2022-11/Singapore%20Second%20Update%20of%20First%20NDC.pdf

Conclusion

STT GDC intends to issue sustainability-linked financing instruments, such as bonds including perpetual bonds, loans, commercial papers, derivatives[92] and other financial instruments,[93] tying the financial characteristics, such as coupon rate, redemption price or margin adjustment to achievement of the following SPTs:

(1) SPT 1: Increase the percentage of renewable energy in total electricity consumption to 85% by 2028 from a 2021 baseline

(2) SPT 2: Reduce scope 1 and 2 carbon intensity by 70% by 2028 from a 2021 baseline

(3) SPT 3: Increase the percentage of data centres certified under recognized green building certification schemes to 65% by 2028 from a 2021 baseline

Sustainalytics considers KPI 1 to be strong given that: i) it is an indirect measure of the Group's performance on a relevant and material environmental issue; ii) it has a sufficient scope of applicability in combination with KPI 2; iii) it follows a clear and consistent methodology that is externally defined; and iv) it supports benchmarking against external science-based trajectories. Sustainalytics considers KPI 2 to be adequate given that: i) it is an indirect measure of the Group's performance on a relevant and material environmental issue; ii) it has a sufficient scope of applicability in combination with KPI 1; iii) it follows a clear and consistent methodology that is externally defined; and iv) it does not lend itself to be benchmarked against science-based trajectories. Sustainalytics considers KPI 3 to be adequate given that: i) it is an indirect measure of the Group's performance on a relevant and material environmental issue; ii) it has a high scope of applicability; iii) it follows a clear and consistent methodology; and iv) does not lend itself to be benchmarked against external science-based trajectories.

Sustainalytics considers the SPTs to align with STT GDC's sustainability strategy. Sustainalytics considers SPT 1 to be ambitious given that: i) it represents a continuous material improvement, and the targeted performance requires addressing new challenges of sourcing renewable energy in the ASEAN regions and India; ii) it is aligned with peer performance; but iii) it does not meet the SBTi's threshold for renewable electricity procurement to reduce scope 2 GHG emissions. Sustainalytics considers SPT 2 to be moderately ambitious given that: i) it is below historical performance; ii) it is aligned with peer performance; but iii) it cannot be compared against external trajectories. Sustainalytics considers SPT 3 to be ambitious given that: i) it is above historical performance; ii) it is above peer performance; but iii) it cannot be compared against external trajectories.

Additionally, Sustainalytics considers the reporting and verification commitments to be aligned with the Sustainability-Linked Bond Principles 2023 and the Sustainability-Linked Loan Principles 2023.

Based on the above, Sustainalytics considers the STT GDC Pte Ltd Sustainability-Linked Financing Framework to be in alignment with the five core components of the Sustainability-Linked Bond Principles 2023 and the Sustainability-Linked Loan Principles 2023 and the prospective achievement of the SPTs to be impactful.

[92] Sustainalytics notes that derivatives are not administered by ICMA or LMA currently and hence are not considered under the scope of this Second-Party Opinion.

[93] Sustainalytics has reviewed only the financial instruments that are specified in the Framework. STT GDC has communicated to Sustainalytics that i) only debt instruments (including perpetual bonds) will be issued under the Framework; and ii) all instruments issued or obtained under the Framework will also have a maturity period of at least one year, and the SPTs will be calibrated towards the relevant maturity for short-term instruments, taking into account STT GDC's decarbonization goals and projected growth of the Group, which may not follow a linear trajectory.

Disclaimer

The issuer is fully responsible for certifying and ensuring compliance with its commitments, for their implementation and monitoring.

About Morningstar Sustainalytics

Morningstar Sustainalytics is a leading ESG research, ratings and data firm that supports investors around the world with the development and implementation of responsible investment strategies. For more than 30 years, the firm has been at the forefront of developing high-quality, innovative solutions to meet the evolving needs of global investors. Today, Sustainalytics works with hundreds of the world's leading asset managers and pension funds, which incorporate ESG and corporate governance information and assessments into their investment processes. Sustainalytics also works with hundreds of companies and their financial intermediaries to help them consider sustainability in policies, practices and capital projects. For more information, visit www.sustainalytics.com.