

Pricing Supplement



S\$1,000,000,000
Multicurrency Medium Term Note Programme

SERIES NO: 001
TRANCHE NO: 001

S\$650,000,000 2.185 Per Cent. Sustainability-Linked Notes Due 2036
Issue Price: 100 per cent.

DBS Bank Ltd.
United Overseas Bank Limited

CDP Issuing and Paying Agent, CDP Calculation Agent, CDP Transfer Agent and CDP Registrar
The Bank of New York Mellon, Singapore Branch
One Temasek Avenue
#02-01 Millenia Tower
Singapore 039192

The date of this Pricing Supplement is 18 October 2021.

This Pricing Supplement relates to the Tranche of Notes referred to above.

This Pricing Supplement, under which the Notes described herein (the "**Notes**") are issued, is supplemental to, and should be read in conjunction with, the Information Memorandum dated 11 October 2021 (as revised, supplemented, amended, updated or replaced from time to time, the "**Information Memorandum**") issued in relation to the S\$1,000,000,000 Multicurrency Medium Term Note Programme of Nanyang Technological University (the "**Issuer**"). Terms defined in the Information Memorandum have the same meaning in this Pricing Supplement. The Notes will be issued on the terms of this Pricing Supplement read together with the Information Memorandum. The Issuer accepts responsibility for the information contained in this Pricing Supplement which, when read together with the Information Memorandum, contains all information that is material in the context of the issue and offering of the Notes.

This Pricing Supplement does not constitute, and may not be used for the purposes of, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorised or to any person to whom it is unlawful to make such offer or solicitation, and no action is being taken to permit an offering of the Notes or the distribution of this Pricing Supplement in any jurisdiction where such action is required.

Where interest, discount income, prepayment fee, redemption premium or break cost is derived from any of the Notes by any person who is not resident in Singapore and who carries on any operations in Singapore through a permanent establishment in Singapore, the tax exemption available for qualifying debt securities (subject to certain conditions) under the Income Tax Act, Chapter 134 of Singapore (the "**Income Tax Act**") shall not apply if such person acquires such Notes using the funds and profits of such person's operations through a permanent establishment in Singapore. Any person whose interest, discount income, prepayment fee, redemption premium or break cost derived from the Notes is not exempt from tax (including for the reasons described above) shall include such income in a return of income made under the Income Tax Act.

There has been no material adverse change, or any development that is likely to result in a material adverse change, in the financial condition, business, results of operations, or assets of the Issuer or the Group, taken as a whole since 31 March 2021.

Notification under Section 309B of the Securities and Futures Act, Chapter 289 of Singapore:

The Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

PROHIBITION OF SALES TO EEA RETAIL INVESTORS – The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("**EEA**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or (ii) a customer within the meaning of Directive (EU) 2016/97 (the "**Insurance Distribution Directive**") where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the "**Prospectus Regulation**"). Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been

prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

PROHIBITION OF SALES TO UK RETAIL INVESTORS – The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom ("**UK**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (the "**EUWA**"); (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the "**FSMA**") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (as amended, the "**UK PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

NANYANG TECHNOLOGICAL UNIVERSITY

Signed:  _____
Authorised Signatory

The terms of the Notes and additional provisions relating to their issue are as follows:

1.	Series No.:	001
2.	Tranche No.:	001
3.	Currency:	Singapore Dollars
4.	Principal Amount of Series:	S\$650,000,000
5.	Principal Amount of Tranche:	S\$650,000,000
6.	Denomination Amount:	S\$250,000
7.	Calculation Amount (if different from Denomination Amount):	Not applicable
8.	Issue Date:	20 October 2021
9.	Trade Date:	Not Applicable
10.	Redemption Amount (including early redemption):	Denomination Amount
11.	Interest Basis:	Fixed Rate
12.	Interest Commencement Date:	20 October 2021
13.	Fixed Rate Note	
	(a) Maturity Date:	Unless previously redeemed or purchased and cancelled, the Notes will be redeemed at their Redemption Amount on 20 October 2036
	(b) Day Count Fraction:	Actual/365 (Fixed)
	(c) Interest Payment Date(s):	Interest on the Notes will be payable semi-annually in arrear on 20 April and 20 October in each year
	(d) Initial Broken Amount:	Not applicable
	(e) Final Broken Amount:	Not applicable
	(f) Rate of Interest:	2.185 per cent. per annum
14.	Floating Rate Note	Not applicable
15.	Variable Rate Note	Not applicable
16.	Hybrid Note	Not applicable

17.	Zero Coupon Note	Not applicable
18.	Issuer's Redemption Option Issuer's Redemption Option Period (Condition 6(d)):	No
19.	Noteholders' Redemption Option Noteholders' Redemption Option Period (Condition 6(e)):	No
20.	Issuer's Purchase Option Issuer's Purchase Option Period (Condition 6(b)):	No
21.	Noteholders' VRN Purchase Option Noteholders' VRN Purchase Option Period (Condition 6(c)(i)):	No
22.	Noteholders' Purchase Option Noteholders' Purchase Option Period (Condition 6(c)(ii)):	No
23.	Redemption for Taxation Reasons (Condition 6(f)):	Yes
24.	Notes to be represented on issue by:	Registered Global Certificate
25.	Talons for future Coupons to be attached to Definitive Notes (and dates on which such Talons mature):	No
26.	Offshore Renminbi Centre(s)	Not Applicable
27.	Applicable TEFRA exemption:	Not Applicable
28.	Prohibition of sales to EEA retail investors:	Applicable
29.	Prohibition of sales to UK retail investors:	Applicable
30.	Listing:	Singapore Exchange Securities Trading Limited

31.	Rating:	The Notes to be issued are expected to be assigned a rating of "Aaa" by Moody's
32.	ISIN Code:	SGXF70293539
33.	Common Code:	240131447
34.	Clearing System(s):	The Central Depository (Pte) Limited
35.	Depository:	The Central Depository (Pte) Limited
36.	Delivery:	Delivery free of payment
37.	Method of issue of Notes:	Syndicated Issue
38.	The following Dealer(s) are subscribing the Notes:	DBS Bank Ltd. and United Overseas Bank Limited
39.	Stabilising Manager(s) (if any):	Not Applicable
40.	Paying Agent:	CDP Issuing and Paying Agent
41.	Registrar:	CDP Registrar
42.	Transfer Agent:	CDP Transfer Agent
43.	The aggregate principal amount of Notes issued has been translated in Singapore dollars at the rate of [●] producing a sum of (for Notes not denominated in Singapore dollars):	Not Applicable
44.	Use of Proceeds:	The net proceeds from the issue of the Notes (after deducting issue expenses) will be used for the refinancing of existing borrowings, general corporate purposes, working capital and capital expenditure requirements (including supporting the Issuer's sustainability research and initiatives, delivery of educational programmes and generational upgrade of infrastructure) of the Issuer, its subsidiaries, its associated companies (if any) and its joint ventures (if any).

45. Private Bank Rebate/Commission:

Not Applicable

46. Other terms:

Please see Annexes II and III

Details of any additions or variations to the terms and conditions of the Notes as set out in the Information Memorandum:

Please see Annex I for further amendment to the terms and conditions of the Notes

Any additions or variations to the selling restrictions:

ANNEX I
AMENDMENTS TO THE TERMS AND CONDITIONS OF THE NOTES

The terms and conditions of the Notes shall be amended by inserting the following as Condition 6A immediately after Condition 6:

6A Sustainability Performance Target

(a) Purchase of Renewable Energy Certificates or Carbon Offsets

If as of the Notification Date:

- (i) the Issuer fails, or is unable, to provide the Satisfaction Notification;
- (ii) the Sustainability Performance Target has not been satisfied; or
- (iii) the External Review Provider has not confirmed satisfaction of the Sustainability Performance Target,

the Issuer shall, within 30 business days from the Notification Date for so long as any Note is outstanding, make additional Investments or purchase Renewable Energy Certificates or Carbon Offsets, in each case, in an amount equal to 0.50 per cent. of the outstanding aggregate principal amount of the Notes. The Issuer shall within 10 business days following any such investment or, as the case may be, purchase in accordance with this Condition 6A, notify the Trustee and the Noteholders in writing in accordance with Condition 16 of such investment or, as the case may be, purchase and provide details of the Investments made (including details on the research, including but not exclusive to the description of the research, expected environmental impacts from the research, allocation timeline and personnel and organisations involved in the research), the Renewable Energy Certificates or Carbon Offsets purchased (including a description of the relevant project and the third-party certification standards that the Renewable Energy Certificates and/or certified Carbon Offsets are verified against) and certify that the Issuer has fully complied with the requirements referred to in this paragraph.

The Trustee shall be entitled to accept and rely on such certificate as sufficient evidence of the satisfaction of the requirements described above.

In these Conditions:

"Carbon Offsets" means credits or certificates from a project that leads to any reduction in greenhouse gas emissions, which is independently audited and assessed in accordance with standards from professional sources with an internationally reputable standing.

"External Review Provider" means PricewaterhouseCoopers LLP or an independent accounting or appraisal firm or other independent qualified provider of third-party assurance or attestation services appointed by the Issuer in good faith, in each case with the expertise necessary to perform the functions required under these Conditions.

"Investments" means investments into various research initiatives in the fields of climate research or technologies relating to climate change mitigation or adaptation.

"kgCO₂e/m²" means kilogramme of carbon dioxide equivalent /square metre.

"Notification Date" means the date which is 45 business days prior to the Interest Payment Date falling on 20 October 2036.

"NTU Yunnan Campus" means the campus of the Issuer located in the Western part of Singapore along Nanyang Avenue.

"Renewable Energy Certificates" means renewable energy attribute certificates, which are labelled by professional sources with an internationally reputable standing representing a megawatt-hour of electricity generated and delivered to the grid from a renewable source.

"Satisfaction Notification" means notification in writing by the Issuer on or before the Notification Date notifying the Noteholders that in respect of calendar year ended 31 December 2035, the Sustainability Performance Target has been satisfied and the satisfaction of the Sustainability Performance Target has been confirmed by the External Review Provider in accordance with its customary procedures.

"Scope 2 gross carbon emissions" means the gross carbon emissions from the Issuer's total electricity consumption from the NTU Yunnan Campus (the calculation for gross carbon emissions will follow the internationally recognised standard and the grid emissions factor used will be taken from the Singapore Energy Market Authority and on the date hereof, the applicable standard is GHG Protocol Corporate Accounting and Reporting Standard). Gross carbon emissions shall be calculated for each calendar year, from 1st January to 31st December.

"Sustainability Performance Target" means to achieve carbon neutrality for the NTU Yunnan Campus by 2035 while aiming to reduce gross carbon emissions intensity by at least 50 per cent., compared to the gross carbon emissions intensity of 56.0 kgCO₂e/m² in 2019 and carbon emissions intensity shall be calculated as kilogrammes of carbon dioxide equivalent emitted per square metre of gross floor area of the NTU Yunnan Campus (and gross floor area is defined as the total area of the covered floor space measured between the centre line of party walls, including the thickness of external walls but excluding voids).

(b) Reporting of Sustainability Performance

So long as any Note remains outstanding, the Issuer shall publish in its annual report or on its website, a report, section or document (each such report, section or other document, a **"Sustainability Performance Report"**), disclosing its performance against the Sustainability Performance Target for the calendar year ending immediately prior to the end of the relevant financial year. Each such Sustainability Performance Report shall include or be accompanied by an independent verification report issued by the External Review Provider (an **"Independent Verification Report"**). Each Sustainability Performance Report and related Independent Verification Report will be published no later than the date of publication of the Issuer's audited consolidated financial statements for the relevant calendar year and the statutory auditor's report thereon.

(c) Consequence of Not Meeting Sustainability Targets

The sole consequence under these Conditions for failure by the Issuer to meet the Sustainability Performance Target on the Notification Date will be the making of additional Investments or the purchase of Renewable Energy Certificates or Carbon Offsets in the circumstances described in Condition 6A(a). Accordingly, for the avoidance of doubt, none of the following events shall constitute a Potential Event Default or an Event of Default under the Trust Deed or these Conditions: (i) the failure by the Issuer to provide the Satisfaction Notification or meet the Sustainability Performance Target (as verified by the External Review Provider); or (ii) an Independent Verification Report fails to confirm that the Sustainability Performance Target has been satisfied by the Issuer as of the Notification Date.

ANNEX II DESCRIPTION OF SUSTAINABILITY TARGETS

NTU'S SUSTAINABILITY PROFILE

Sustainability Vision and Mission

NTU's vision in relation to sustainability is to be a global leader in mitigating environmental impact through the interplay of technology, policy and human behaviour. NTU's mission in relation to its sustainability efforts is to strengthen and integrate research themes and capacities at NTU for addressing global sustainability grand challenges and national priorities of Singapore.

The lead players at NTU in sustainability in addition to the schools and colleges are the key research institutes such as Energy Research institute at NTU ("**ERI@N**"), Nanyang Environment and Water Research Institute ("**NEWRI**"), Singapore Centre for Environmental Life Sciences Engineering ("**SCElse**") and Earth observatory of Singapore ("**EOS**"). A new NTU Sustainability Office will be established at NTU, that will coordinate inter-disciplinary collaboration between NTU's leading research institutes such as ERI@N, NEWRI, EOS, SCElse, departments (including the Office of Development and Facilities Management ("**ODFM**")), schools, divisions and offices, to embed sustainability goals in NTU's culture. The NTU Sustainability Office, in partnership with these key sustainability entities such as ERI@N, NEWRI, EOS, SCElse, ODFM, aspires to:

- develop multidisciplinary, collaborative, and high impact sustainability research projects, including work that drives technology development, emphasises potential, and expands public-private partnerships;
- drive sustainability research and development by focusing resources and extending collaborations to find new opportunities, track trends, within the highly dynamic and fast-growing sustainability field;
- support projects to expand sustainability education curriculum within NTU's organisational structures and in NTU's broader and more general sustainability education initiatives; and
- play a key supporting and coordinating role in sustainability programmes and projects at NTU in support of NTU's sustainability ambitions.

Sustainability Pillars

NTU has identified four key pillars along which sustainability goals and solutions are organised. These pillars are:

- resource use and emissions;
- campus operations;
- education and research; and
- community engagement.

The first pillar is resource use and emissions. The key material topics within this pillar are energy, greenhouse gas emissions, water and waste. NTU has the biggest university campus in Singapore and has over 40,000 people studying, working or living on campus, and therefore consumes considerable amounts of resources. As NTU pursues continual improvement through its research initiatives, progress is tracked and reviewed, with results being reported using international reporting standards, such as the Global Reporting Initiative (GRI) standards, on an annual basis. After a phase focused on research, development and demonstration, NTU plans to select the most efficient technologies and approaches to implement them on a larger scale on campus.

The second pillar of NTU's sustainability approach is campus operations. The key material topics within this pillar are procurement, transportation and green buildings. NTU's vision is to be a global leader in the implementation of technologies and sustainable mobility on campus.

The third pillar on education is where NTU is planning to introduce new courses related to sustainability offered to both undergraduate and postgraduate students across NTU. This is important as there is a need to educate the future generations of not only global sustainability challenges, but to also inculcate a problem-solving approach and learning pedagogy in them. In addition to this, the third pillar also comprises several research projects towards solving key issues in energy, water, waste, climate, environment.

The fourth pillar is community engagement in which several socio-economic challenges and solution of sustainability will be addressed.

Sustainability Strategy and Roadmap

Sustainability is a grand challenge of our time. The opportunities are just as big, and NTU is in an ideal position to follow and support Singapore's lead in this area by making a virtue out of a necessity. NTU's sustainability strategy will be based on existing partnerships between four of NTU's world-class research institutes:

1. ERI@N is a centre-of-excellence for advanced research, development, and demonstration of innovative energy solutions with global impact.
2. NEWRI is a world-leading research and deployment entity in water and waste technology domains.
3. SCELSE is a Research Centre of Excellence focusing on biofilms and microbiomes for sustainable environmental, engineering, public health and medical applications.
4. EOS is a Research Centre of Excellence conducting fundamental research on earthquakes, volcanic eruptions, tsunamis, and climate change in and around Southeast Asia, toward safer and more sustainable societies.

Collectively, these four research institutes would collaborate in emerging areas such as energy, marine science and engineering, urban water cycle, air microbiome in the urban environment, public health, sea-level rise, circular economy, climate change, and food etc. Further, the four research institutes have significant engagement with the various schools and colleges at NTU, and is thus in a position to harness and build a comprehensive sustainability solution. In addition to these, additional key themes, including medical and public health (led by Lee Kong Chian School of Medicine), socio- and environmental-economics (led by School of Humanities and Social Sciences and Economic Growth

Centre), business sustainability (led by Nanyang Business School and Centre for Business Sustainability), and sustainability education for professionals and community members (led by the National Institute of Education) is also part of NTU's strategy. NTU aims to be at the epicentre of knowledge creation, innovation and industry engagement in the Jurong Innovation District and the new Tuas Mega Port, which is in close proximity. This gives NTU a unique opportunity for R&D, test-bedding sustainability related initiatives.

NTU has started improving its energy efficiency as far back as 2011. NTU aims to convert all buildings to Green Mark Platinum certification, and has set an ambitious target of halving net energy utilisation, water usage and waste generation compared to levels in 2011 by March 2026. NTU is on target to meet this target by 2026. This is made possible as a result of various energy saving initiatives including:

- Obtaining Green Mark Platinum ratings by the Building and Construction Authority of Singapore ("**BCA**") for all its buildings that are > 2,000 m²
- Venturing into using unconventional high impact energy saving systems as well as state-of-the art systems for both new and existing buildings and facilities
- Implementing the passive displacement ventilation systems within the campus which reduces the energy required to cool spaces
- Replacing sodium street lightings and fluorescent tubes with LED lightings
- Generation of renewable energy via the installation of solar panels (5MW) on NTU's campus.

As part of the NTU 2025 strategy, NTU has planned a series of sustainability initiatives. NTU plans to support efforts for on-campus test bedding projects in areas including innovative green energy, carbon footprint lowering technologies and waste management technologies. NTU also plans to undertake clean energy and autonomous vehicle development and pilot projects both on and off campus. NTU will also encourage the use of digital technologies to improve working, learning and living experiences on campus. NTU has also set sustainability-based targets under the NTU 2025 strategy. NTU aims to convert all buildings to Green Mark Platinum certification, and has set an ambitious target of halving net energy utilisation, water usage and waste generation compared to levels in 2011 by March 2026.

In addition, NTU is exploring the option of implementing an integrative approach which will maximise the capacities from individual domains. Some of these areas might lead to test-bedding research projects on campus towards NTU's sustainability goals. This will strengthen the relevance and value of NTU's areas of expertise including:

- Urban engineering
NTU has major strengths in engineering of key urban systems. These include water and energy technologies, air pollution and microbiome monitoring and control, smart building design, and solid waste management.
- Circular economy
NTU's sustainability efforts are strengthened by research to develop closed-loop systems that minimise the use of resource inputs that also limit the creation of waste, pollution and carbon emissions across a series of process applications and industries.

- **Genomics**
The high-throughput sequencing facility and compute cluster at NTU's Singapore Centre for Environmental Life Sciences Engineering provides state-of-the-art genomics technologies and associated processing power that places NTU at the forefront of the field.
- **Phenomics**
NTU's Singapore Phenome Centre delivers world-class metabolic phenotyping research and services to its scientific community, Singapore's researchers and industries in Singapore and beyond.
- **Ecology**
NTU studies the ecology of a range of natural and urban ecosystems, including forest, marine, air and urban waterways, as well as host-microbiome systems of humans, animals and plants.
- **Marine science**
NTU is a major player in the national Marine Research & Development Programme of the National Research Foundation, which has placed Singapore at the forefront of marine science in the region. Singapore is aptly positioned in Southeast Asia by providing the research and technology capacity to interrogate and understand the region's unique 'coral triangle' ecology and biodiversity to ensure sustainability.
- **Sea-level rise**
NTU integrates instrumental, historical and geological sea-level datasets in Southeast Asia with sophisticated modelling capabilities to improve the accuracy of projections of sea-level rise and extreme sea levels, and to communicate the results to the scientific community, governmental agencies and the public.

NTU will also focus on emerging important sustainability areas including: climate change science and solutions, food science and technology, synthetic biology, maritime engineering, smart living, and plant science etc.

NTU, with its strong leadership in research and development, owns and operates many laboratories, both Wet Laboratories (with fume exhaust) and Dry Laboratories (without fume exhaust), and in general, energy consumption from the laboratories, especially from Wet Laboratories are much higher than non-laboratories spaces such as offices and common areas. As part of its research or innovation efforts, NTU also installs energy intensive equipment. Considering this, NTU's current Energy Usage Index demonstrates that NTU is currently operating at a very energy efficient level.

Accolades

In recognition of NTU's efforts and commitment to sustainability, NTU has received multiple accolades from globally recognised sustainability accreditation agencies. NTU uses BCA's Green Mark assessment certification to benchmark its building sustainability effort. In 2014 NTU received the Green Mark Champion Award, and in 2016 NTU received the BCA's highest award, the Green Mark Platinum^{Star} Champion Award. In 2019 NTU broke BCA's record for the most number of awards received, receiving seven Zero Energy Building ("**ZEB**") awards and two Super Low Energy ("**SLE**") awards. In 2020 NTU received 62 Platinum Awards for 60 Building Projects, 1 Park and 1 District, and obtained 7 ZEB and 2 SLE awards.

Other accolades received by NTU include:

- two PUB ABC Water Awards;
- the Solar Pioneer Award 2013;
- the PUB Water Efficient Building Award;
- the ASEAN Energy Award; and
- BCA Green Mark Platinum^{Star} Champion 2016 (first such award in Singapore)

SUSTAINABILITY-LINKED FINANCING AND FRAMEWORK

Rationale

As a leading global university, committed to the advancement of sustainable development, NTU has set up an ambitious roadmap for its sustainability efforts. Sustainability-linked financing that aligns sustainability strategies, key performance indicators and targets at the organisational level with financing objectives were deemed as the optimal financing options matching NTU's commitment and confidence in driving its sustainability initiatives. NTU has thus prepared its sustainable-linked bond framework (the "**Framework**"), with the intention for NTU to issue sustainability linked bonds ("**SLBs**"), where its funding is linked to NTU's sustainability targets.

The Framework is prepared to be in line with the Sustainability Linked Bond Principles 2020 by the International Capital Market Association (the "**Principles**"), to ensure that the SLBs meet the market best practices and to demonstrate robust management of the SLBs.

For the avoidance of doubt, the SLBs may be in any currency, tenor, or with other terms and conditions, including covenants, to reflect NTU's financing strategy.

Sustainability-Linked Bond Framework

For the avoidance of doubt, proceeds from the SLBs are not exclusively for any green or sustainable project, and can be used to finance any general corporate purposes by NTU.

In accordance with the Principles, the Framework is presented with the following five core components:

- Selection of key performance indicator ("**Key Performance Indicator**")
- Calibration of sustainability performance target ("**Sustainability Performance Target**")
- Bond characteristics
- Reporting
- Verification

Selection of Key Performance Indicator

With the ratification of the 2016 Paris Agreement under the United Nations Framework Convention on Climate Change, nations around the world are placing greater emphasis on sustainability. NTU is committed to tackling new challenges and creating a positive impact by creating sustainable solutions. NTU has been embracing activities enabling sustainability and has been actively tracking its energy, water, waste footprint on campus since 2011.

A key part of the NTU 2025 strategy highlighted above is to reduce its own environmental footprint. Hence, NTU has selected the sustainability Key Performance Indicator below for its SLBs:

Key Performance Indicator - NTU's Scope 2 gross carbon emissions intensity (kgCO₂e/m²) from the NTU Yunnan Campus

Scope 2 gross carbon emissions from NTU's total electricity consumption divided by the gross floor area of the NTU Yunnan Campus.

NTU is focusing on the intensity of Scope 2 gross carbon emissions (which are indirect emissions from the generation of purchased energy) for the purpose of the Framework as they represent the key environmental footprint within NTU's core operations which NTU has reasonable control over. Scope 1 emissions (which are direct emissions from owned or controlled sources), which includes fuel used for backup generators for buildings on campus for example, has been excluded as they are deemed immaterial. From 2011 to 2019, Scope 1 emissions amounted to between 0.95% to 1.31% of NTU's total Scope 1 and 2 gross carbon emissions. With regard to Scope 3 carbon emissions (which are all indirect emissions other than Scope 2 emissions, that occur in the value chain of the reporting company, including both upstream and downstream emissions), a large proportion of it is not within NTU's direct control and it has thus been excluded from the scope of the Key Performance Indicator. However, in the long run, NTU is committed to reducing its Scope 3 carbon emissions as well.

Gross carbon emissions intensity shall be calculated as kilogrammes of carbon dioxide equivalent emitted per square meter of gross floor area of the NTU Yunnan Campus. The calculation for gross carbon emissions will follow internationally recognised standards (which, at the date of this Pricing Supplement, is the GHG Protocol Corporate Accounting and Reporting Standard) and the grid emissions factor used will be taken from the Singapore Energy Market Authority ("**EMA**"). Please refer to Sustainability-linked Bonds – External Review of Framework – Calculation of Methodology on the methodology in calculating gross carbon emissions intensity.

Calibration of Sustainability Performance Target

Sustainability, especially reducing its environmental footprints, is not new to NTU as NTU started improving its energy efficiency as far back as 2011. Having made significant progress since 2011, NTU aims to continue its ambitious sustainability journey by setting a new target as below:

Sustainability Performance Target	Achieve carbon neutrality for the NTU Yunnan Campus by 2035, while aiming to reduce gross carbon emissions intensity by at least 50% from the 2019 baseline
Baseline (2019)	Gross carbon emissions intensity of 56.0 kilogrammes of carbon dioxide equivalent / square meter in 2019

Baseline: 2019 was selected as the baseline as 2020 was an unusual year due to the COVID-19 pandemic.

Target: The table below shows NTU's historical gross carbon emissions intensity for the 10 years before, and including, the baseline year (2019) which demonstrates a clear and consistent improvement over the years.

NTU's Scope 2 Carbon emissions intensity from 2011 to 2020

	Scope 2 gross carbon emissions (kgCO ₂ e)	Gross floor area for the NTU Yunnan Campus (m ²)	Scope 2 gross carbon emissions intensity (kgCO ₂ e/m ²)
2011	105,109,836	1,096,722	95.9
2012	99,754,977	1,100,441	90.7

2013	90,584,595	1,128,780	80.2
2014	87,734,673	1,173,551	74.8
2015	86,909,265	1,189,723	73.1
2016	90,965,717	1,267,285	71.8
2017	83,979,342	1,382,376	60.7
2018	82,659,450	1,388,991	59.5
2019	78,607,586	1,404,030	56.0
2020¹	74,342,093	1,404,030	53.0

From 2011 to 2019, NTU had managed to significantly reduce its gross carbon emissions intensity by 42%. Moving forward, NTU intends to reduce its gross carbon emissions intensity even further by targeting to reduce gross carbon emissions intensity by at least 50% from the 2019 baseline, and to offset the remaining Scope 2 gross carbon emissions to achieve carbon neutrality by 2035. NTU believes that the target is an ambitious one against the baseline and reflects NTU's commitment to decarbonisation and sustainable development.

NTU seeks to mobilise all resources available to achieve the Sustainability Performance Target, and will seek to achieve it through three levers, namely, reducing energy consumption for the NTU Yunnan Campus, sourcing renewable energy, and carbon offsets. In addition to the reduction of gross carbon emissions from campus infrastructure, NTU will also drive organisational and individual behavioural changes and practices to reduce emissions from business travel, work models, education and pedagogical innovations, and greater deployment of innovative green technologies.

1) Reducing energy consumption for the NTU Yunnan Campus

As part of the NTU 2025 strategy, NTU has planned a series of sustainability initiatives. NTU will support efforts for on-campus test-bedding projects in areas including innovative green energy and carbon footprint lowering technologies. NTU also plans to undertake clean energy vehicle development and pilot projects, both on and off campus. NTU will also encourage the use of digital technologies to improve working, learning and living experiences on campus. Some of the initiatives NTU has planned to embark on to drive down NTU's energy consumption include:

- investments in smart technology to regulate temperature on a real-time basis;
- adopting state-of-the-art materials to improve energy efficiency in its infrastructural buildings; and
- continuing research in the area of sustainability to bring about reductions in its carbon footprint.

Although NTU has identified future projects to reduce its energy consumption, NTU will still require considerable efforts and investments to achieve the Sustainability Performance Target, including exploring new technologies and innovative solutions to enable further savings.

2) Sourcing renewable energy

NTU will explore sourcing its electricity from renewable sources together with its utility providers.

3) Carbon offsets

While NTU is fully committed to reducing its gross carbon emissions intensity as much as possible through levers (1) and (2) above, in the event that there are residual gross carbon emissions, NTU will

¹ Gross carbon emissions intensity is computed using the 2019 Grid Emission Factor

purchase high quality carbon offsets meeting global verification standards, to achieve carbon neutrality by 2035.

Bond Characteristics

For each specific SLB issuance, NTU will look to satisfy the above Sustainability Performance Target outlined. In the event that NTU fails to satisfy the Sustainability Performance Target, this will trigger the penalty event. The mechanism for penalty will reference the calculation amount of the notes and will be used for one of the following:

- additional investments into various research initiatives in the fields of climate research or technologies relating to climate change mitigation or adaptation, in an amount that references the calculation amount of the notes; or
- purchase of renewable energy certificates ("**RECs**") or certified carbon offsets in an amount that references the calculation amount of the notes.

In the event that the penalty event is triggered, NTU will set aside the appropriate funds to meet the penalty.

More details of the bond characteristics and the penalty payment event of each issue of SLB issuance shall be specified in the relevant bond documents of each SLB transaction.

For additional investments into research initiatives, NTU will disclose details on the research, including but not exclusive to:

- description of the research;
- expected environmental impacts from the research;
- allocation timeline; and
- personnel and organisations involved in the research.

For RECs and certified carbon offsets, NTU will disclose details of the RECs and/or certified carbon offsets purchased, including details on the relevant projects and the third-party certification standards that the RECs and/or certified carbon offsets is verified against.

Reporting

NTU will publish a report annually, and in any case for any date or period relevant for assessing the Sustainability Performance Target performance leading to a potential adjustment of the SLB's financial and/or structural characteristics.

Information related to NTU's sustainability performance against the set targets will be available in the progress reports to be published on NTU's website at www.ntu.sg.

The following information may be included in the report:

- Up-to-date information on the performance of the selected Key Performance Indicator, including baselines where relevant.
- Verification assurance report outlining the Key Performance Indicator performance against the Sustainability Performance Target.

- Any information which NTU considers relevant towards enabling investors to monitor progress against Sustainability Performance Target as well as analysis of NTU's selected Key Performance Indicator and Sustainability Performance Target.

Verification

NTU is committed to aligning with best practices and will engage an independent third party with the relevant expertise to verify NTU's performance level against the Sustainability Performance Target for the Key Performance Indicator on an annual basis. The verification of the performance against the Sustainability Performance Target will also be published on NTU's website at www.ntu.edu.sg.

External Review of the Framework

External Review Provider

NTU has prepared the Framework to be in line with the relevant Principles and has engaged PricewaterhouseCoopers LLP to provide a limited assurance statement on the Framework's alignment with the Principles. The limited assurance statement can be found on NTU's website at www.ntu.edu.sg.

NTU is also committed to develop appropriate knowledge and expertise in NTU and will conduct external reviews to the Framework, as necessary.

Calculation Methodology

NTU uses one major source of energy which is the EMA administered power grid electricity. Accordingly, NTU uses the EMA Grid Emission Factor to compute gross carbon emission intensity defined as follows:

$$\text{Gross carbon emissions intensity (kgCO}_2\text{e/m}^2\text{)} = \frac{\text{(Energy Consumed (kWh/yr) X Grid Emission Factor)}}{\text{Gross Floor Area}}$$

The Grid Emission Factor ("**GEF**") measures average CO₂ emissions emitted per MWh of electricity generated. The Operating Margin GEF ("**OM GEF**") measures all generating power plants' generation-weighted average CO₂ emissions per unit net electricity generation in the system. The OM GEF includes generation technologies from main power producers (e.g. combined cycle power plants, waste-to-energy) and autoproducers (e.g. embedded co-generation plants and solar).

Gross floor area is defined as the total area of the covered floor space measured between the centre line of party walls, including the thickness of external walls but excluding voids.

Information on Website

The Framework can be found on NTU's website at www.ntu.edu.sg. Notwithstanding anything in the Information Memorandum (as supplemented by this Pricing Supplement) to the contrary, neither NTU's sustainability progress reports (including the Framework) nor any third-party verification or limited assurance statements, or any other information on NTU's website, is incorporated by reference in or forms part of the Information Memorandum or this Pricing Supplement.

ANNEX III
AMENDMENTS TO THE INFORMATION MEMORANDUM

For the purposes of the issuance of the Notes, the Information Memorandum shall be amended by adding the following additional risk factors in addition to those under the section titled "Risks relating to the Notes" appearing on page 25 of the Information Memorandum:

"The Notes may not be a suitable investment for all investors seeking exposure to assets with sustainability characteristics

Although the Notes will be issued as sustainability-linked notes, they may not satisfy an investor's requirements or any future legal or other standards for investment in assets with sustainability characteristics. Any purchase of renewable energy certificates or carbon credits or offsets as contemplated by the Terms and Condition of the Notes will depend on NTU achieving, or not achieving, the Sustainability Performance Target, which may be inconsistent with or insufficient to satisfy investor requirements or expectations. Prospective investors in the Notes should have regard to the information set out herein and must determine for themselves the relevance of such information for the purpose of any investment in the Notes, together with any other investigation such investor deems necessary. NTU's Sustainability Performance Target is to achieve carbon neutrality for the NTU Yunnan Campus by 2035 while aiming to reduce Scope 2 gross carbon emissions intensity, compared to the gross carbon emissions intensity of 56.0 kgCO₂e/m² in 2019. NTU's Sustainability Performance Target is uniquely tailored to NTU's business, operations and capabilities, and it does not easily lend itself to benchmarking against similar sustainability performance targets, and the related performance, of other issuers. No assurance is or can be given to investors by NTU, the Dealers, the External Review Provider (as defined in the Terms and Conditions of the Notes) or any second party opinion providers that the Notes will meet any or all investor expectations regarding the Notes or NTU's Sustainability Performance Target qualifying as "green", "social", "sustainable" or "sustainability-linked" or that any adverse environmental, social and/or other impacts will not occur in connection with NTU striving to achieve the Sustainability Performance Target or the use of the net proceeds from the offering of Notes.

No assurance or representation is given by NTU, the Dealers, the External Review Provider or any second party opinion provider as to the suitability or reliability for any purpose whatsoever of any opinion, report, certification or validation of any third party in connection with the offering of the Notes or the Sustainability Performance Target to fulfil any green, social, sustainability, sustainability-linked and/or other criteria. Any such opinion, report or certification is not, nor shall it be deemed to be, incorporated in and/or form part of the Information Memorandum.

The second party opinion provider and providers of similar opinions, certifications and validations are not currently subject to any specific regulatory or other regime or oversight. Any such opinion or certification is not, nor should be deemed to be, a recommendation by NTU, the Dealers, the External Review Provider or any second party opinion provider to buy, sell or hold the Notes. Noteholders have no recourse against NTU, the Dealers, the External Review Provider or the provider of any such opinion or certification for the contents of any such opinion or certification, which is only current as at the date of its issuance. Prospective investors must determine for themselves the relevance of any such opinion, certification or validation and/or the information contained therein and/or the provider of such opinion, certification or validation for the purpose of any investment in the Notes. Any withdrawal of any such opinion or certification or any such opinion, certification attesting that NTU is not complying

in whole or in part with any matters for which such opinion, certification or validation is opining on or certifying on may have a material adverse effect on the value of the Notes and/or result in adverse consequences for certain investors with portfolio mandates to invest in securities to be used for a particular purpose.

Although NTU intends to decrease the Scope 2 gross carbon emissions relating to the NTU Yunnan Campus, there can be no assurance of the extent to which it will be successful in doing so, that it may decide not to continue with the Sustainability Performance Target or that any future investments it makes in furtherance of the Sustainability Performance Target will meet investor expectations or any binding or non-binding legal standards regarding sustainability performance, whether by any present or future applicable law or regulations or by its own constitution or other governing rules or investment portfolio mandates, in particular with regard to any direct or indirect environmental, sustainability or social impact. Although if the Sustainability Performance Target is not met it will oblige NTU to make additional Investments or purchase Renewable Energy Certificates or Carbon Offsets as described in the Terms and Conditions of the Notes, it will not be an Event of Default under the Notes, nor will NTU be required to repurchase or redeem any Notes in such circumstances nor will such failure to meet the Sustainability Performance Target change the obligations of NTU for the payment of principal of or interest on, and all other amounts payable under, the Notes.

NTU's efforts in achieving the Sustainability Performance Target may further become controversial or be criticised by activist groups or other stakeholders.

NTU calculates and reports its key performance indicators and sustainability performance targets based on certain standards and guidelines which may change over time and impact its ability to achieve such indicators and targets.

Although NTU's key performance indicators and sustainability performance targets are subject to review or assurance by a qualified independent third party, these evaluations are made internally by NTU, based on broadly accepted standards, and then reported externally. Investors should be aware that the standards and guidelines on which such indicators and targets are based on may change over time and there can be no assurance that the way in which NTU calculates and reports its key performance indicators and sustainability performance targets will not change over time.

Achieving the Sustainability Performance Target or any similar sustainability performance targets will require NTU to expend significant resources, while not meeting any such targets could expose NTU to reputational risks

As described in the section entitled "Sustainability-Linked Bond Framework" of the Information Memorandum, achieving the Sustainability Performance Target will require NTU to achieve carbon neutrality for the NTU Yunnan Campus by 2035 while aiming to reduce Scope 2 gross carbon emissions intensity (per square meter) by at least 50% from the 2019 baseline. As a result, achieving the Sustainability Performance Target or any similar sustainability performance targets NTU may choose to include in future financings or other arrangements will require NTU to expend significant resources.

In addition, if NTU does not achieve the Sustainability Performance Target or any such similar sustainability performance targets NTU may choose to include in any future financings could harm NTU's reputation, the consequences of which could, in each case, have a material adverse effect on NTU, its business prospects, its financial condition or its results of operations.

The Notes are not "green bonds" and may not satisfy an investor's requirements or future standards for assets with sustainability characteristics

Although NTU will be required to make Investments or purchase Renewable Energy Certificates or Carbon Offsets in an aggregate amount equal to 0.50% of the outstanding aggregate principal amount of the Notes on or prior to the Maturity Date in the manner as described in the Terms and Condition of the Notes if NTU fails to satisfy the Sustainability Performance Target, the Notes may not satisfy an investor's requirements or any future legal or quasi-legal standards for investment in assets with sustainability characteristics. Although NTU intends to satisfy the Sustainability Performance Target by 2035, there can be no assurance of the extent to which NTU will be successful in doing so or that any future investments it makes in furtherance of this target will meet investor expectations or any binding or non-binding legal standards regarding sustainability performance, whether by any present or future applicable law or regulations or by its own internal requirements or other governing rules or investment portfolio mandates, in particular with regard to any direct or indirect environmental, sustainability or social impact. It will not be an Event of Default under the Notes nor will NTU be required to repurchase or redeem the Notes if it fails to satisfy the Sustainability Performance Target by 2035.

No assurance or representation is given as to the suitability or reliability for any purpose whatsoever of any opinion of any third party (whether or not solicited by NTU) that may be made available in connection with the Sustainability-Linked Bond Framework or the Notes. For the avoidance of doubt, any such opinion is not and shall not be deemed to be incorporated into and/or form part of the Information Memorandum. Any such opinion is not, nor should be deemed to be, a recommendation by NTU or any Dealer, or any other person to buy, sell or hold the Notes. Any such opinion is only current as of the date that opinion was initially issued. Prospective investors must determine for themselves the relevance of any such opinion and/or the information contained therein and/or the provider of such opinion for the purpose of any investment in the Notes. Currently, the providers of such opinions are not subject to any specific regulatory or other regime or oversight. Any withdrawal of any such opinion or any additional opinion or statement that NTU is not complying in whole or in part with any matters for which such opinion is opining may have a material adverse effect on the value of the Notes and/or result in adverse consequences for certain investors with mandates to invest in securities to be used for a particular purpose."