ASSESSMENT
30 June 2025

Send Your Feedback

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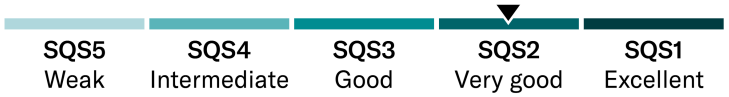
Singapore Management University

Second Party Opinion – Sustainable Financing Framework Assigned SQS2 Sustainability Quality Score

Summary

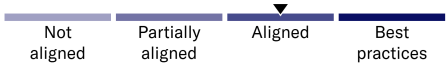
We have assigned an SQS2 Sustainability Quality Score (very good) to Singapore Management University's (SMU) sustainable financing framework, dated June 2025. The university has established its use-of-proceeds framework with the aim of financing projects across eight eligible green categories and one eligible social category. The framework is aligned with the four components of the International Capital Market Association's (ICMA) Green Bond Principles (GBP) 2025, Social Bond Principles (SBP) 2025 and the Sustainability Bond Guidelines (SBG) 2021, and the Loan Market Association, Asia-Pacific Loan Market Association and Loan Syndications & Trading Association's (LMA/APLMA/LSTA) Green Loan Principles (GLP) 2025 and Social Loan Principles (SLP) 2025. The framework demonstrates a significant contribution to sustainability. In addition, the framework is aligned with the ASEAN Green Bond Standards 2018, ASEAN Social Bond Standards 2018 and ASEAN Sustainability Bond Standards 2018, as detailed in Appendix 4 to this report.

Sustainability quality score



Alignment with principles
USE OF PROCEEDS

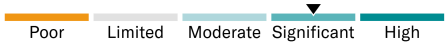
Overall alignment



FACTORS	ALIGNMENT
Use of proceeds	
Evaluation and selection	
Management of proceeds	
Reporting	

Contribution to sustainability

Final contribution to sustainability



Preliminary contribution to sustainability
Relevance and magnitude

Additional considerations **No adjustment**

POINT-IN-TIME ASSESSMENT

Scope

We have provided a Second Party Opinion (SPO) on the sustainability credentials of SMU's sustainable financing framework, including the framework's alignment with the ICMA's GBP 2025, SBP 2025 and SBG 2021, and the LMA/APLMA/LSTA's GLP 2025 and SLP 2025. Under the framework, the university plans to issue use-of-proceeds sustainable finance instruments to finance projects across eight eligible green categories and one eligible social category, as outlined in Appendix 3 of this report.

We have also provided a supplementary opinion on the framework's alignment with the ASEAN Green Bond Standards 2018 (ASEAN GBS), ASEAN Social Bond Standards 2018 (ASEAN SBS) and ASEAN Sustainability Bond Standards 2018 (ASEAN SUS) developed by the ASEAN Capital Markets Forum. We performed a full review of the framework in the context of the ASEAN GBS and ASEAN SBS, as set out therein. The assessment is solely based on information provided by the issuer. Our supplementary opinion does not constitute a verification, certification or audit, is distinct from the Alignment with Principles Score, has no influence on the expressed Sustainability Quality Score and does not express an opinion on any financial instrument's compliance with Shari'ah law.

Our assessment is based on the last updated version of the framework received on 27 June 2025, and our opinion reflects our point-in-time assessment[1] of the details contained in this version of the framework, as well as other public and non-public information provided by the company.

We produced this SPO based on our Assessment Framework: Second Party Opinions on Sustainable Debt, published in March 2025.

Issuer profile

Singapore Management University (SMU) was established in January 2000 under the SMU Act, and was incorporated as a non-profit company. The university was set up according to a corporatized model to provide greater operating and hiring flexibility — an effort to help it compete internationally. SMU's mission is to generate leading-edge research with global impact and to produce broad-based, creative, and entrepreneurial leaders for the knowledge-based economy. It is one of the six public autonomous universities in Singapore. With a focus on business, economics, social sciences, information systems, law and related disciplines, SMU has around 13,600 students enrolled in eight schools.

SMU has broad exposure to environmental risks which reflect Singapore's susceptibility to sea level rise over the long run as a low-lying island nation, although the potential impact on the university is not expected to be as severe. SMU's exposure to social risks is driven by demographic and societal trends, particularly the expected decline of the domestic undergraduate-age population over time given Singapore's persistently low birthrates. However, these risks are mitigated by continued growth of international student enrollment, as well as its postgraduate programs, both of which are supported by the university's specialization in business, information systems, law and related disciplines.

Strengths

» Projects in the green buildings category will include the renovation of existing buildings to meet the latest Green Mark buildings certification standards, thereby enhancing energy efficiency across SMU's campus

» Transparent project evaluation and selection process with clear exclusion criteria

» Commitment to external verification on the allocation of proceeds, until full allocation and in case of material changes

Challenges

» SMU has not committed to disclose the share of refinancing and look back period to investors prior to issuance, however, the proportion of refinancing will be included in the post-issuance reporting

» No commitment to obtain external verification on impact reporting

Alignment with principles

SMU's sustainable financing framework is aligned with the four core components of ICMA's GBP 2025, SBP 2025 and SBG 2021, and the LMA/APLMA/LSTA's GLP 2025 and SLP 2025. For a summary alignment with principles scorecard, please see Appendix 1. Additionally, the framework is aligned with the ASEAN GBS, ASEAN SBS and ASEAN SUS, as detailed in Appendix 4 to this report.

- ☑ Green Bond Principles (GBP)
- ☑ Green Loan Principles (GLP)
- ☑ Social Bond Principles (SBP)
- ☑ Social Loan Principles (SLP)
- ○ Sustainability-Linked Bond Principles (SLBP)
- ○ Sustainability Linked Loan Principles (SLLP)

Use of proceeds

Clarity of the eligible categories – ALIGNED

SMU has communicated the nature of the expenditures and the exclusion criteria for all eligible categories. The eligibility criteria for nearly all project categories have been defined; however, the sustainable water and wastewater management category lacks specific technical thresholds. SMU has confirmed that eligible projects will mostly be located within its campus in Singapore; co-location data centers under the information and communications technology category would be located elsewhere within Singapore, and renewable energy certificates (RECs) under the renewable energy category could originate from other countries in Southeast Asia.

Clarity of the environmental or social objectives – BEST PRACTICES

SMU has shared with us the environmental and social (E&S) objectives of the eligible categories. The green buildings, information and communications technology, energy efficiency, renewable energy and clean transportation categories target climate change mitigation. The pollution prevention, control & circular economy category targets climate change mitigation and circular economy adapted products, production technologies and processes. The objectives of the sustainable water and wastewater management, climate change adaptation and access to essential services categories are sustainable water and wastewater management, climate change adaptation and access to essential services, respectively.

The university has referenced the United Nation's (UN) Sustainable Development Goals (SDGs) in articulating the objectives of the eligible categories (see Appendix 2), and the objectives are coherent with these recognized international standards.

Clarity of expected benefits – ALIGNED

SMU has identified relevant benefits for all eligible categories, and these are relevant and measurable based on the projects that are likely to be financed under each category. In addition to the impact indicators listed in the framework, SMU has shared that they will also report on the number of users benefitting from the programs under the access to essential services category, where feasible. SMU has not committed to disclose the share of refinancing and look back period to investors prior to issuance.

Process for project evaluation and selection

Transparency and clarity of the process for defining and monitoring eligible projects – BEST PRACTICES

SMU has established a clear and structured process for selecting and evaluating eligible assets, as well as an E&S risk management process to mitigate potential E&S risks, as detailed in its framework which will be publicly disclosed. Potential eligible projects will be selected by the office of finance, together with relevant staff and subject experts, and this includes assessing and managing potential E&S risks associated with the proposed projects. Short-listed projects will be reviewed and approved by the relevant sustainability working group and the chief financial officer. Post-financing, E&S risks will continue to be monitored and managed throughout the life

of the sustainable finance transaction. Projects may be removed from the portfolio of eligible projects if E&S risks are not addressed or mitigated satisfactorily.

SMU has shared that it will continuously monitor the compliance of financed projects with the eligibility and exclusion criteria throughout the life of the sustainable financing instrument. If a project no longer meets the eligibility criteria, the university will remove the project from the portfolio of eligible projects and replace it as soon as reasonably practicable. SMU has also confirmed that eligibility of projects will be reassessed in cases of project divestments or postponements.

Management of proceeds

Allocation and tracking of proceeds – ALIGNED

SMU has defined a clear process for the management of proceeds in its framework, which will be publicly available. The university has shared that net proceeds will be placed in general treasury and tracked by the office of finance, and the balance of the tracked proceeds will be adjusted annually to match allocations to eligible projects. SMU has not disclosed the maximum time for full allocation of net proceeds.

SMU has disclosed the intended types of temporary placements for unallocated proceeds, which include cash or cash equivalents, marketable securities or alternative investments such as hedge funds and private assets. The university has not committed to unallocated proceeds not being invested in greenhouse gas (GHG)-intensive or controversial activities.

Reporting

Reporting transparency – ALIGNED

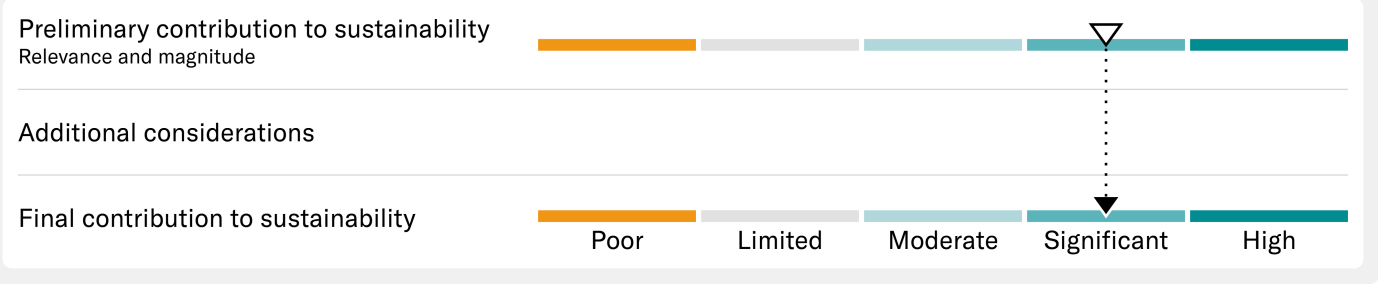
SMU has confirmed that it will publish both allocation and impact reports annually until the full allocation of net proceeds, and on a timely basis in case of material developments. The reporting will include relevant information, such as total amount allocated by eligible project and brief descriptions of each eligible project, the balance of unallocated proceeds, the share of proceeds used for refinancing and the expected E&S impacts of the eligible projects. Reporting for bonds will be publicly available while reporting for loans will be made available to lenders upon request.

SMU has identified and disclosed relevant E&S reporting indicators for all the eligible categories within its framework. In addition to the impact indicators listed in the framework, SMU has shared that they will also report on the number of users benefitting from the programs under the access to essential services category, where feasible.

SMU will disclose the reporting methodology and calculation assumptions used in the reporting to bondholders and lenders. The university will also obtain independent verification on its allocation reporting, until full allocation and in case of material changes. However, SMU has not committed to do so for its impact reporting.

Contribution to sustainability

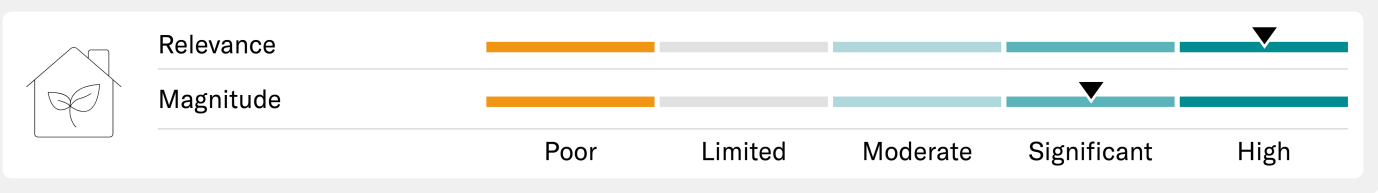
The framework demonstrates a significant overall contribution to sustainability. This reflects a preliminary contribution to sustainability score of significant, based on the relevance and magnitude of the eligible project categories, and we have not made an adjustment to the preliminary score based on additional contribution to sustainability considerations.



Preliminary contribution to sustainability

The preliminary contribution to sustainability is significant, based on the relevance and magnitude of the eligible project categories. Based on information provided by SMU, we expect a vast majority of proceeds from forthcoming issuances will be allocated to the green buildings category and a small proportion to the access to essential services category. A detailed assessment by eligible category has been provided below.

Green buildings

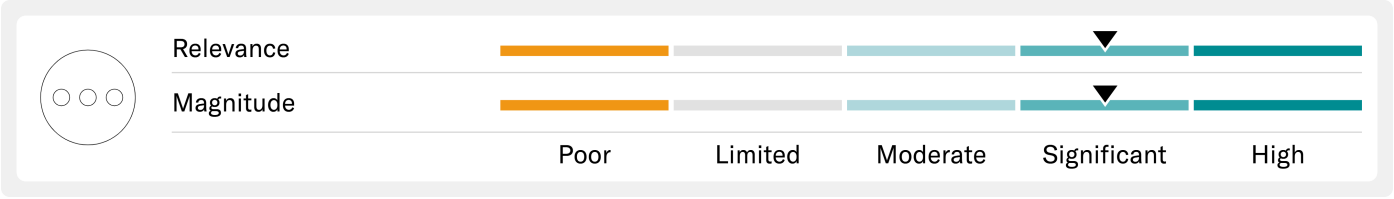


The building sector is one of the largest energy consumers and GHG emitters globally[2]. In Singapore, where SMU's campus is located, buildings account for more than 20% of national emissions[3]. The country's green building masterplan targets 80% of buildings being certified under Green Mark and 80% of new buildings achieving Green Mark Super Low Energy certification, by 2030[4]. As an educational institution, the operation of buildings is a key source of SMU's GHG emissions, primarily driven by energy consumption. SMU's existing buildings are all certified under Green Mark and under its sustainability roadmap the university has set a target for all campus buildings to achieve Green Mark Super Low Energy (SLE) certification within two to three years.

The financed projects are likely to have a significantly positive impact on reducing carbon emissions from SMU's campus operations. SMU has shared with us that the majority of the proceeds under this category in the forthcoming issuance will be used for refinancing the existing Green Mark SLE building and the renovation and upgrade of existing Green Mark Platinum buildings. The university has confirmed that eligible renovation projects must result in the achievement, maintenance or improvement of the building's Green Mark certification rating. Under the Green Mark building certification, for buildings undergoing major retrofit, the lowest rating of Gold^{PLUS} requires that the building achieves at least 30% energy savings compared to the prevailing baseline regulations which are broadly consistent with the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) 90.1 standard. This requirement is aligned with the Climate Bonds Initiative's (CBI) approved proxies of low carbon buildings criteria[5]. The lowest rating achieved for SMU's existing buildings is Green Mark Platinum. Two of the university's buildings have achieved SLE and Zero Energy, respectively. The required minimum energy efficiency improvement for existing buildings with Green Mark Platinum and SLE is 35% and 40%, respectively, compared to the energy efficiency required by building codes effective in 2021[6]. Certified Zero Energy buildings are Super Low Energy buildings which are powered solely by renewable energy. Thus, we expect that the renovation of SMU's buildings will improve the energy performance of the campus. The renovation of buildings also has a lower carbon footprint, with less significant embodied carbon considerations and fewer material environmental and social externalities, compared to the construction of new buildings. While proceeds could be allocated for new construction and acquisition of buildings in the future, SMU has confirmed that newly constructed buildings will achieve a minimum rating of Green Mark SLE, and acquired buildings will have a minimum

certification of Green Mark Platinum. SMU has also shared that environmental and social impact assessments (ESIA) will be conducted for any new construction, minimizing potential negative externalities.

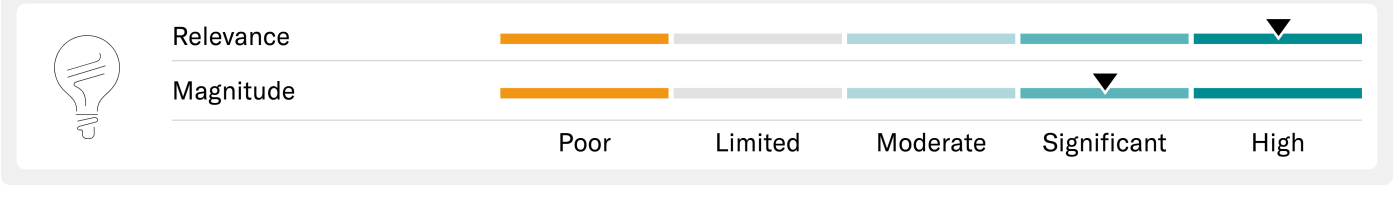
Information and communications technology



The information and communication technology (ICT) sector contributes around 2% of global emissions[7] and this share will rise with increasing digitalization and demand for internet connectivity[8], largely due to the energy-intensive nature of data centers. Singapore houses 60% of Southeast Asia's data center capacity, which accounts for around 7% of the country's electricity consumption and this is projected to increase to 12% by 2030[9]. The development of power-efficient data centers is critical to the decarbonization of the ICT sector. However, for SMU, the energy consumption of its buildings is more significant compared to that of its data centers or its use of co-location data centers. Furthermore, the eligibility criteria for data centers does not explicitly address water usage effectiveness (WUE), which is a material topic for data centers given their potential water intensiveness.

The magnitude of this category is significant. SMU has shared with us that immediate proceeds under this category will likely be used to finance new on-premise data centers. New data centers must meet the Singapore-Asia Taxonomy (SAT) green criteria, which requires that facilities achieve a Platinum rating under the BCA-IMDA Green Mark Scheme for New Data Centres. This includes attaining a power usage effectiveness (PUE) of at least 1.39 at 25% load, aligning with the Climate Neutral Data Centre Pact (CNDCP) requirement of not more than 1.4 for warm climates[10]. This is more stringent than the industry average PUE of 1.58, as reported by Uptime Institute[11]. While SMU has confirmed that a majority of proceeds under this category will go towards new data centers, proceeds will also be used for retrofit of existing data centers. For retrofit of existing data centers, the data centers must reach the required Green Mark Gold^{PLUS} rating, under the BCA-IMDA Green Mark Scheme for New Data Centres, which requires a PUE threshold of 1.46[12]. This threshold does not meet the CNDCP's requirement and we assess such projects to have a lower magnitude on a stand-alone basis based on their environmental footprint. However, the criteria is aligned with the SAT amber criteria requirement for retrofit of facilities beginning from 2025. Also in line with the SAT amber criteria requirement, the retrofit of existing data centers must have a pathway of reaching the full capacity PUE threshold required in the SAT green criteria from 2030. All eligible projects under this category must also use refrigerants with global warming potential (GWP) of less than 675. Low GWP refrigerants have lower GHG emissions which reduces negative externalities resulting from leakage. Financing the use of co-location data centers is also eligible under this category. While this can support the development of green data centers, the level of impact depends on how the eligible financing would contribute directly to climate change mitigation, such as whether renewable energy would be purchased or energy efficiency upgrades would result from the financing. Thus, on a stand-alone basis, co-location data center projects are also likely to have a lower magnitude. In terms of water usage efficiency, while this is considered under the Green Mark schemes, there is no mandatory threshold that must be met. SMU has confirmed that the on-site data centers will be small-scale, potentially achieving lower water usage compared to large-scale facilities, which somewhat mitigates the concern over water consumption. Nevertheless, water usage remains a material issue for data centers, particularly those utilizing wet cooling systems.

Energy efficiency



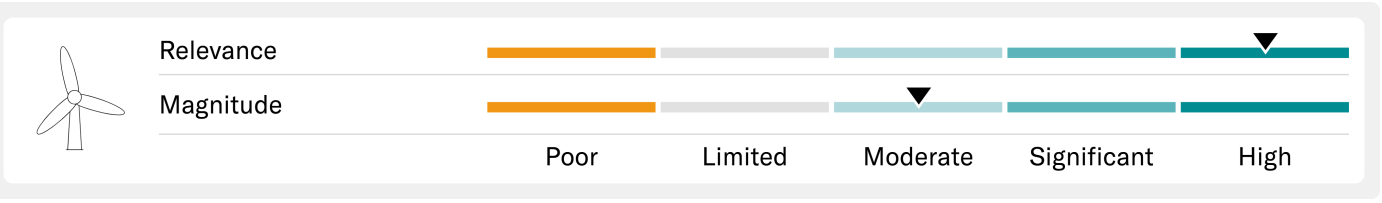
The relevance of projects and activities eligible under this category is high. SMU has shared that projects financed under this category are likely to be infrastructure for district cooling systems, as well as air-conditioning and lighting. Cooling systems and lighting are amongst the main sources of energy consumption in buildings. In Singapore, cooling systems and lighting account for approximately 60% and 15% of electricity consumption in non-residential buildings, respectively[13]. Plug loads, resulting from the usage of equipment

such as computers and monitors, are also a significant source of energy consumption, accounting for up to 25% of a building's total energy usage[14].

The magnitude of this category is significant. The projects financed under this category are likely to have a positive impact on reducing energy usage. SMU has shared with us that district cooling-related projects would include installing a thermal storage tank connected to the university's district cooling system. This is an effective measure to optimize energy use by producing and storing chilled water or ice at night when ambient temperature is lower, to meet cooling demands in the day, thereby reducing peak load consumption.

For installation, maintenance, repair of equipment, SMU has indicated that potential projects may involve overhauling its existing enhanced passive displacement cooling system and lighting optimization, such as the implementation of Internet of Things connected lighting systems. These lighting systems automatically adjust brightness based on occupancy and natural light levels, thereby reducing energy consumption. According to the eligibility criteria, these lighting systems must be certified within the top two energy efficiency classes. For projects involving water-cooled building cooling systems, while the eligible efficiency thresholds defined have a wider range, we expect the actual total system efficiency achieved by projects to be at least 0.74 kW/RT, as required by Singapore's Building and Construction Authority (BCA) Green Mark 2021[15], as all of the university's buildings are certified at a minimum of Green Mark Platinum[16].

Renewable energy

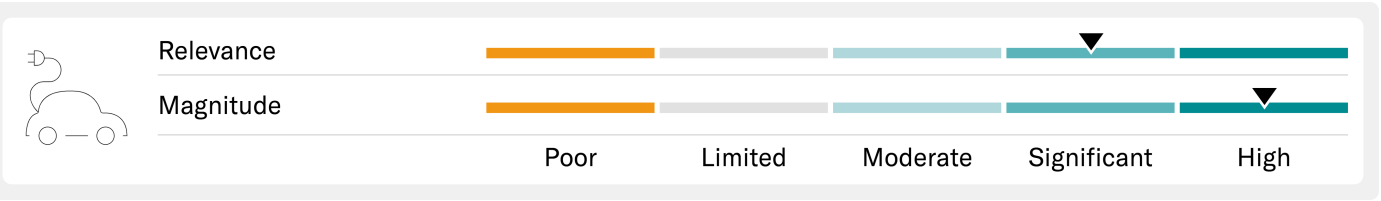


This category is highly relevant because projects would help to reduce SMU's carbon footprint and expand the installed capacity of renewable energy in Singapore. Singapore's energy mix remains largely dependent on fossil fuels, with natural gas as the primary energy source[17]. The Singapore Green Plan 2030 aims to achieve 2 gigawatt-peak (GWp) by 2030 through solar energy deployment, to meet about 3% of the country's estimated electricity demand, underscoring the importance of increasing renewable energy sources in Singapore[18]. The topic is also relevant to SMU given its commitment to using 100% renewable energy, although this involves the purchase of RECs where the university is unable to attain sufficient renewable energy on-site.

The overall magnitude is moderate due to the inclusion of RECs under this category, which is largely an indirect procurement of renewable energy in the marketplace. The uncertainty associated with the extent to which RECs contribute to the addition of new renewable energy capacity contributes to the overall moderate score. SMU has shared that in the next three to five years, all of the proceeds allocated to this category will be used to finance on-site solar photovoltaic (PV) installations and directly connected storage capacity. The university has also communicated its intention to prioritize on-site renewable solar PV installations before financing bundled RECs. Unbundled RECs are not eligible.

We view rooftop solar PV installations and storage capacity directly connected to solar PV installations favorably, as the projects will have highly positive long-term impacts on climate change mitigation by using best available technologies, with no lock-in effects. However, due to the limited availability of renewable energy resources in Singapore and the physical constraints of the university's campus for expanding solar PV installations and storage capacity, we expect that over the long-term, a significant amount of the proceeds under this category will be allocated to bundled RECs. While bundled RECs may result in the direct use of renewable energy by the university, we do not have visibility into whether hourly matching will be done. Additionally, we have limited information on whether the RECs originate from underlying physical PPAs, and if so, whether the physical PPAs are tied to new projects. This limits our visibility into whether the RECs will contribute to an increase in the renewable energy capacity of the electrical grid.

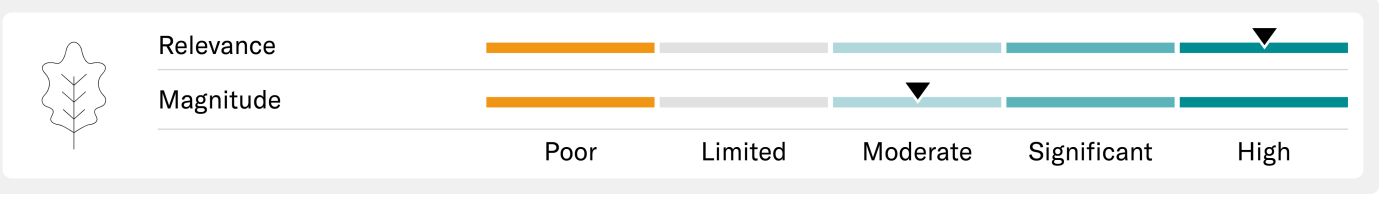
Clean transportation



In Singapore, the transport sector is the third-largest source of carbon emissions, accounting for 15% of the country's emissions[19]. The provision of low carbon transport infrastructure, such as electric vehicle (EV) charging stations and hydrogen refueling stations for personal mobility devices supports targets under the Singapore Green Plan 2030 to promote the adoption of cleaner vehicles[20]. Infrastructure supporting walking and cycling, such as pedestrian pathways and bicycle lanes, is also aligned with Singapore's Land Transport Master Plan 2040 to reduce the land transport sector's carbon footprint[21]. The inclusion of such mobility supporting infrastructure is also promoted under the Green Mark 2021 building certification scheme, under criteria relating to health and wellbeing. However, transportation emissions is not as material an issue for SMU to address compared to carbon emissions from the university's operation of buildings

We expect projects financed under this category to have a highly positive impact on climate change mitigation with no carbon lock-in effects. EV charging stations are essential to increasing the use of zero-tailpipe emissions vehicles, which are considered the best available technology and align with the sector's decarbonization pathway and measures. SMU has confirmed that financed EV charging stations will be powered by renewable energy sourced from on-site solar PV. Electrical charging and hydrogen refueling installations for personal mobility devices are also eligible under this category. For electrical charging installations, although the positive short- to medium-term impact will likely be less significant in locations where the electrical grid is still predominantly powered by fossil fuels, the projects will have a positive long-term environmental impact as grid decarbonization advances. For hydrogen refueling installations, SMU has not specified any exclusion criteria for the type of hydrogen used. Thus, the hydrogen could be produced using natural gas. Similar to the electrical charging installations, the projects would have a more positive long-term impact on climate change mitigation when clean hydrogen is available at scale. Other projects under this category — pavements, bike lanes, pedestrian zones, and parking provisions — promote active mobility and similarly offer alternatives to transport modes involving GHG emitting vehicles.

Pollution prevention, control and circular economy



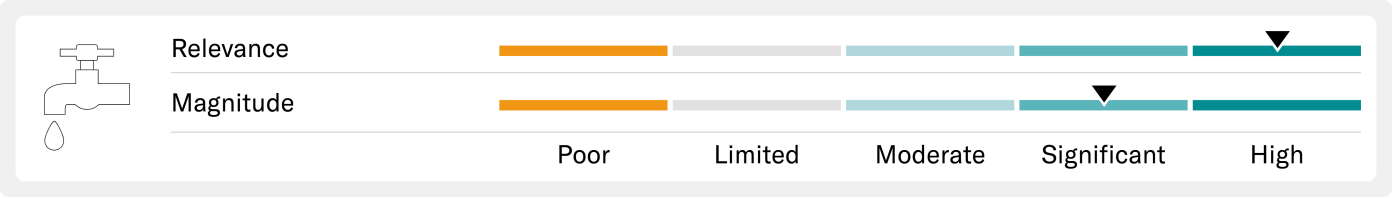
The relevance of this category is high because the eligible projects address an important sustainability issue for the issuer and within the regional context. Regarding the operation of buildings, solid waste generation has significantly increased on a global scale and is a substantial source of GHG emissions, particularly methane. Enhancing waste management aligns with various national policies, including Singapore's Zero Waste Masterplan[22]. The topic is also important to SMU, as reflected in their goals for a zero waste campus and sustainable procurement.

The projects in this category have a moderate magnitude due to the lack of detailed thresholds, although we expect limited negative externalities. Sustainable procurement projects involve the procurement of materials with ecolabels from different certification schemes, and we expect that these would mainly relate to building products and materials. While these measures can promote responsible sourcing and help mitigate negative externalities associated with the activities, they do not ensure that a minimum threshold of recycled or recyclable content is met in all circumstances, limiting visibility regarding the extent to which waste will be reduced.

Waste management activities involve the collection and treatment of food waste on campus, primarily focusing on food waste digesters, and these initiatives are generally viewed as beneficial. The food waste is processed in a biodigester, where it is broken down into gray water that is subsequently discharged into the drainage system. The remaining output is disposed of and not sent for further

waste treatment. Also, potential methane leakages are not yet addressed. Waste-to-energy projects, landfill activities, and waste transportation vehicles are not included. Thus, we expect limited externalities and lock-ins from the investments within this category.

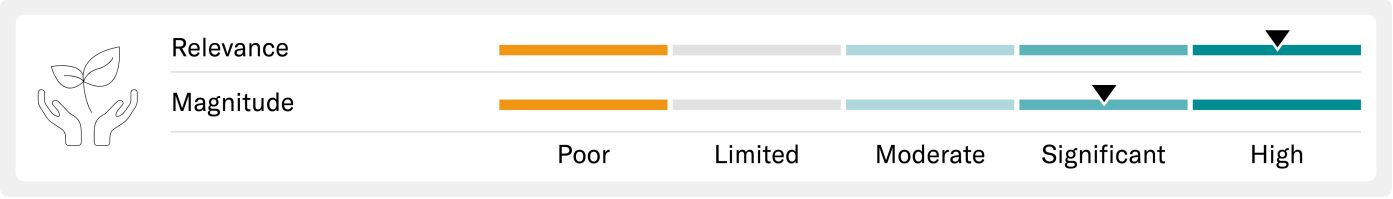
Sustainable water and wastewater management



The relevance of this category is high because it addresses the critical importance of water management in Singapore — one of the most water-stressed countries in the world — given its limited natural water resources and the scarcity of land available for storage facilities[23]. With Singapore's water demand projected to nearly double by 2065, strengthening water conservation efforts is a key strategy for effectively managing this increasing demand. Given that 55% of Singapore's water consumption is attributed to the non-domestic sector, and this share will continue to increase[24], the financing of water management projects is highly relevant to SMU. Rainwater is recognized as a key source of water in Singapore, and the use of water-efficient fittings and appliances is also actively promoted under the government's water policies. SMU has also been actively tracking the water efficiency index (WEI) of its campus since 2011 to improve its water usage efficiency despite an increasing student population.

The magnitude of this category is significant. We expect that eligible projects will have a long-term positive impact on sustainable water management and are unlikely to result in significant negative externalities. The projects financed under this category will primarily focus on the implementation of smart water systems and rainwater harvesting and reuse systems. Smart water systems facilitate the detection of spikes in water usage, helping to identify leaks and enabling prompt rectification, thereby reducing water loss. For water reuse, SMU has shared that collected rainwater and recycled water, such as from air handling unit condensate, will be used for landscape irrigation in the university's campus[25]. SMU has confirmed that it will measure the amount of water saved and the reduction in its overall WEI resulting from financed projects. However, specific targets on improvement in water efficiency and target reduction rates for water leakage have not been set. This limits visibility into the full extent to which the projects will contribute to the environmental objective.

Climate change adaptation

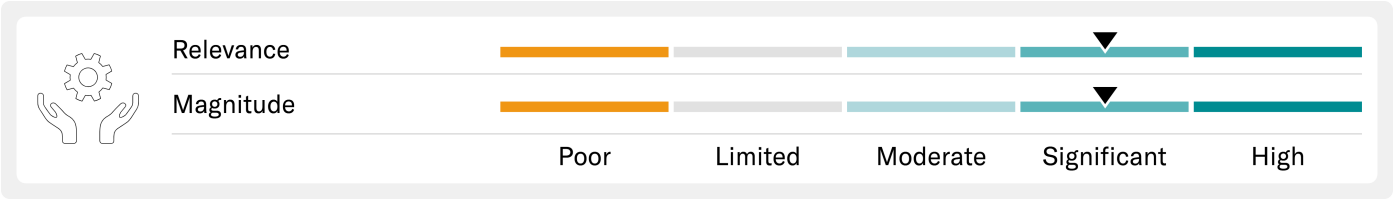


Strengthening climate change adaptation measures is highly relevant for SMU because Singapore is particularly vulnerable to climate risks such as intense rainfall and increasing temperatures. As a low-lying country with about 30% of its land less than five metres above sea level, Singapore faces heightened risk of flooding[26]. In terms of rising temperatures, the country's annual mean surface temperature has risen over the past few decades with the recent decade from 2010 to 2019 being the warmest on record[27]. Eligible projects align with the Urban Redevelopment Authority's (URA) strategies for climate change adaptation in urban planning in Singapore. URA's plans encompass flood risk mitigation and maintaining thermal comfort in buildings, which includes researching new strategies under the Cooling Singapore initiative which is a multi-institutional project of which SMU is a part of[28].

The magnitude of this category is significant. Eligible projects will increase the resilience of SMU's infrastructure and support Singapore's heat mitigation efforts against physical climate risks. The climate change adaptation measures included under this category include measures to achieve heat resilience, flood defense, and research and development (R&D) dedicated to climate change adaptation measures. Heat reflective paint is proven to effectively mitigate the urban heat island (UHI) effect. This can reduce indoor ambient temperature and lower the demand for air conditioning, which is one of the main sources of building energy consumption in Singapore. SMU has shared that potential flood defense projects include permeable surfaces, green roofs and underground stormwater drainage tanks. These projects would reduce stormwater runoff and help manage the risk of flooding on campus.

Financing R&D for climate change adaptation measures could positively contribute to the development of new adaptation solutions in Singapore and inform national policy and strategy in the long-term. Given its role as a major research university in Singapore, SMU is involved in national initiatives to enhance climate responsiveness. For example, the Cooling Singapore initiative, in collaboration with SMU, utilizes a Digital Urban Climate Twin (DUCT) platform to evaluate the effectiveness of various heat management strategies prior to their real-world implementation[29]. While such R&D initiatives are valuable for government agencies in simulating and assessing scenarios, thereby facilitating the development of new climate change adaptation solutions, the implementation of their outcomes remains beyond the university's control. Consequently, the extent of their potential impact on the intended environmental objective remains uncertain.

Access to essential services



The relevance of this category is significant. Eligible projects address important social challenges in Singapore, such as expanding access to education and supporting the mental well-being of students, which are closely in line with national strategies. Financial aid provision and inclusive design of facilities promote meritocracy and inclusive access to quality education. Programs aimed at enhancing knowledge transfer could facilitate greater research outcomes. Eligible healthcare projects also support Singapore's National Mental Health and Well-Being Strategy, which highlights the importance of providing mental health support for students through school counselors, peer support and provision of relevant resources[30]. Based on Singapore's national population health survey, those aged 18 to 29 years old have the highest proportion of poor mental health compared to other age groups. Thus, the government emphasizes the need for mental health literacy and support among youths. The overall significant relevance considers the fact that knowledge transfer programs are not as highly relevant for SMU to address compared to the other eligible sub-categories.

The overall magnitude of this category is significant as eligible projects will enhance access to education and healthcare by addressing financial or physical limitations.

Eligible education projects include the provision of financial aid to students. SMU's financial aid programs aim to make education affordable for students from low-income households, such as through SMU Access Plus, which supports government bursaries to provide full coverage of tuition fees for eligible students[31]. The program clearly defines eligibility thresholds based on household income where the gross monthly per capita income (PCI) threshold is aligned with Singapore's Ministry of Education guidelines, ensuring that support is provided for the most vulnerable group. Students from households with a monthly PCI of less than SGD750 ($582) will receive the most support, including full coverage of tuition fees, an annual living allowance and a global experience grant over four years.

Projects relating to inclusive design of SMU's facilities will improve the physical accessibility of SMU's campus and its education resources, programs, and facilities. The target population is aligned with the user groups defined in Singapore's BCA Universal Design index (UDi)[32], including people with disabilities, expectant or nursing mothers, elderly and families with young children. SMU has shared that projects will relate to the installation of user-friendly features aligned with BCA's UDi, such as Braille and tactile building signage and indicators on handrails, hearing enhancement systems at information counters and BCA code-compliant nursing rooms. SMU has communicated its intention to improve its buildings' BCA UDi ratings from "C" — described by BCA as having fair universal design provisions, catering to some user groups — to reach at least the second highest rating of "B" — described by BCA as having good universal design provisions, catering well to most user groups — which indicates improved user-friendliness.

SMU also plans to finance open access research programs, under which the university will bear journal article publication charges to ensure its research is freely accessible to the public. This initiative extends the reach of its scientific research, including to researchers and policy makers worldwide. While this ensures that SMU's research is freely available to all, we note the broad scope of potential applications by its users.

For eligible healthcare projects, SMU plans to finance projects which support mental health amongst its students. The university's student wellness center provides counseling services, accessibility support for students with disabilities, peer-level support and well-being resources. Services are available to all students for free. However, the category lacks project details to fully assess the quality of financed services and facilities, and their contribution to the provision of mental health support.

Additional contribution to sustainability considerations

We have not made an adjustment to the preliminary contribution to sustainability score based on additional considerations.

In terms of ESG risk management, SMU employs a comprehensive due diligence process for managing ESG risks associated with the financed projects. The board of trustees oversees sustainability governance, ensuring management implements effective risk management and internal controls for key sustainability risks. The board is supported by SMU's university management committee and executive committee in approving sustainability policies. Potential E&S risks of eligible projects are assessed during the project selection process by the office of finance and relevant subject matter experts, and will be monitored and managed throughout the life of the sustainable finance instrument by the above parties and the relevant sustainability working group. Where E&S risks are not addressed or mitigated satisfactorily, SMU will review the inclusion of the project in its eligible projects portfolio.

The framework is coherent with the sustainability priorities of SMU. 'Sustainable living' is amongst the university's three strategic priorities in their 2025 strategic plan and the university aims to integrate sustainable practices into its academic framework, research initiatives, and campus operations. SMU's sustainability blueprint defines required action across four key strategies — cultivating a greener university, developing change agents, driving impactful research and fostering resilient communities — which encompasses goals such as sustainable energy use, construction and refurbishment, water management and procurement, zero waste, integration of sustainability into SMU's curriculum and developing sustainability research.

Appendix 1 - Alignment with principles scorecard for SMU's sustainable financing framework

Factor	Sub-factor	Component	Component score	Sub-factor score	Factor score
Use of proceeds	Clarity of the eligible categories	Nature of expenditure	A	Aligned	**Aligned**
		Definition of content, eligibility and exclusion criteria for nearly all categories	A		
		Location	A		
		BP: Definition of content, eligibility and exclusion criteria for all categories	No		
	Clarity of the objectives	Relevance of objectives to project categories for nearly all categories	A	Best practices	
		Coherence of project category objectives with standards for nearly all categories	A		
		BP: Objectives are defined, relevant and coherent for all categories	Yes		
	Clarity of expected benefits	Identification and relevance of expected benefits for nearly all categories	A	Aligned	
		Measurability of expected benefits for nearly all categories	A		
		BP: Relevant benefits are identified for all categories	Yes		
		BP: Benefits are measurable for all categories	Yes		
		BP: Disclosure of refinancing prior to issuance and in post-allocation reporting	No		
		BP: Commitment to communicate refinancing look-back period prior to issuance	No		
Process for project evaluation and selection	Transparency and clarity of the process for defining and monitoring eligible projects	Clarity of the process	A	Best practices	**Best practices**
		Disclosure of the process	A		
		Transparency of the environmental and social risk mitigation process	A		
		BP: Monitoring of continued project compliance	Yes		
Management of proceeds	Allocation and tracking of proceeds	Tracking of proceeds	A	Aligned	**Aligned**
		Periodic adjustment of proceeds to match allocations	A		
		Disclosure of the intended types of temporary placements of unallocated proceeds	A		
		BP: Disclosure of the proceeds management process	No		
		BP: Allocation period is 24 months or less	No		
Reporting	Reporting transparency	Reporting frequency	A	Aligned	**Aligned**
		Reporting duration	A		
		Report disclosure	A		
		Reporting exhaustivity	A		
		BP: Allocation reporting at least until full allocation of proceeds, and impact reporting until full bond maturity or loan payback	No		
		BP: Clarity and relevance of the indicators on the sustainability benefits	Yes		
		BP: Disclosure of reporting methodology and calculation assumptions	Yes		
		BP: Independent external auditor, or other third party, to verify the tracking and allocation of funds	Yes		
		BP: Independent impact assessment on environmental and social benefits	No		
Overall alignment with principles score:					**Aligned**

Legend: BP - Best practice, A - Aligned, PA - Partially aligned, NA - Not aligned

Appendix 2 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The nine eligible categories included in SMU's framework are likely to contribute to seven of the United Nations' Sustainable Development Goals (SDGs), namely:

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 3: Good Health and Well-being	*Access to Essential Services*	3.8: Achieve universal health coverage with access to quality and affordable essential health-care services and medicines for all
GOAL 4: Quality Education	*Access to Essential Services*	4.A: Build and upgrade education facilities that provide safe and effective learning environments for all
GOAL 6: Clean Water and Sanitation	*Sustainable Water and Wastewater Management*	6.4: Increase water-use efficiency across all sectors and ensure sustainable supply of freshwater to reduce water scarcity
GOAL 7: Affordable and Clean Energy	*Renewable Energy*	7.2: Increase substantially the share of renewable energy in the global energy mix
	Energy Efficiency	7.3: Double the global rate of improvement in energy efficiency
	Information and Communications Technology	
GOAL 11: Sustainable Cities and Communities	*Green Buildings*	11.6: Reduce the adverse per capita environmental impact of cities, with special attention to air quality and waste management
	Information and Communications Technology	
	Clean Transportation	
	Pollution Prevention, Control and Circular Economy	
	Climate Change Adaptation	11.B: Increase number of cities with plans towards inclusion, resource efficiency, and climate change and disaster resiliency
GOAL 12: Responsible Consumption and Production	*Sustainable Water and Wastewater Management*	12.2: Achieve the sustainable management and efficient use of natural resources
	Pollution Prevention, Control and Circular Economy	12.5: Substantially reduce waste generation through prevention, reduction, recycling and reuse
GOAL 13: Climate Action	*Climate Change Adaptation*	13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
	Green Buildings	13.2: Integrate climate change measures into national policies, strategies and planning
	Energy Efficiency	
	Renewable Energy	

The United Nations' Sustainable Development Goals (SDGs) mapping in this SPO considers the eligible project categories and associated sustainability objectives/benefits documented in SMU's financing framework, as well as resources and guidelines from public institutions, such as the ICMA SDG Mapping Guidance and the UN SDG targets and indicators.

Appendix 3 - Summary of eligible categories in SMU's framework

Eligible Categories	Description	Sustainability Objectives	Impact Reporting Metrics
Green Buildings	• Buildings that meet the prevailing Building and Construction Authority's ("BCA") Green Mark certification through: - New construction - Renovation of existing buildings - Acquisition of buildings • Any other recognised green building certification that is of equivalent standard.	Climate Change Mitigation	• Number of green buildings, including the scheme and certification level • Reduction in Energy Use Index (EUI) (kWh/m2)
Information and Communications Technology	**Data Centres** On-premise or co-location green data centres that meet the following requirements: • BCA-IMDA Green Mark Scheme for New Data Centres – Platinum rating, for new facilities located in Singapore, or other recognised green data centre certification that is of equivalent standard; • Retrofitting of existing data centres to reach BCA-IMDA Green Mark Scheme for Existing Data Centres – GoldPlus rating, or other recognised green data centre certification that is of equivalent standard, for retrofitting of existing facilities located in Singapore, with a pathway of reaching Power Usage Efficiency (PUE) (at full capacity) green criteria from 2030; and • Global warming potential (GWP) of refrigerants used in the data centre cooling system does not exceed 675.	Climate Change Mitigation	• Number of green data centres, including the scheme and certification level • GHG emissions reduced/ avoided in tonnes of CO2 equivalent
Energy Efficiency	**District Cooling Systems**: All activities related to district cooling systems. **Installation, Maintenance, Repair of Equipment**, including: • Equipment within the two highest energy efficiency classes for equipment, as determined by relevant international labelling scheme or Singapore regulations; and • Water-cooled building cooling system – with total system efficiency (TSE) of ≤0.9kW/ton, or chilled water system efficiency of ≤0.65 kW/ton.	Climate Change Mitigation	• Annual energy savings in MWh • Annual GHG emissions avoided/reduced in tonnes of CO2 equivalent

Eligible Categories	Description	Sustainability Objectives	Impact Reporting Metrics
Renewable Energy	• All solar energy generation and storage capacity, and supporting infrastructure; and • Renewable Energy Certificates (RECs) from renewable energy facilities connected to a grid operated by a Singapore regulated-entity and which is located in Singapore, or contractually supplying electricity in Singapore, or located in Southeast Asia, and which meet national, regional or international standards for RECs such as the Singapore Standard SS 673.	Climate Change Mitigation	• Annual GHG emissions reduced/ avoided in tonnes of CO2 equivalent • Annual on-site renewable energy generation in MWh • Annual renewable energy certificates purchased and retired in MWh
Clean Transportation	Low carbon transport infrastructure, such as: • Electric vehicle charging solutions; • Pavements, bike lanes and pedestrian zones; • Parking provisions for active mobility modes; and • Electrical charging and hydrogen refuelling installations for personal mobility devices.	Climate Change Mitigation	• Number of new low carbon transport infrastructure added
Pollution Prevention, Control and Circular Economy	**Sustainable Procurement**: Products and materials with ecolabels by national, regional, or internationally recognised and reputable certification schemes including but not limited to: • Singapore Green Labelling Scheme by the Singapore Environment Council (SEC); • EU Ecolabel; and • Forest Stewardship Council (FSC) label. **Waste Management**: Facilities, systems and equipment for the collection and treatment of food waste on campus, including but not limited to the installation of food waste biodigesters.	Climate Change Mitigation; Circular Economy Adapted Products, Production Technologies and Processes	• Annual amount of sustainability-certified goods purchased in S$ • Annual absolute amount of food waste that is separated and/or collected and treated in tonnes per annum • Reduction in Waste Disposal Index (WDI) (kg/pax/day)

Eligible Categories	Description	Sustainability Objectives	Impact Reporting Metrics
Sustainable Water and Wastewater Management	Products and equipment enabling efficient water management and water recycling such as smart water metering systems and sensors, and rainwater harvesting and re-use systems.	Sustainable Water and Wastewater Management	• Annual absolute amount of water collected/treated (m^3) • Reduction in Water Efficiency Index (WEI) (litres/pax/day)
Climate Change Adaptation	Activities to reduce climate related risks and strengthen campus climate resilience, including but not limited to: • Measures to achieve heat resilience, such as the use of heat reflective paint on building exteriors; • Flood defence systems; and • Research & Development dedicated to climate change adaptation measures.	Climate Change Adaptation	• Type and number of climate adaptation programmes rolled out during the year • Description of climate adaptation programmes rolled out during the year
Access to Essential Services	**Access to Quality Education** Programmes that promote access to affordable and inclusive education and knowledge. Examples include but are not limited to the following: • Financial aid to students from low-income households ; • Investments in new facilities or retrofit of existing education facilities to be child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all; and • Programmes that enhance knowledge transfer and promote equitable access to scientific research, such as Open Access Research programmes. **Access to Affordable Quality Healthcare** Programmes, resources and/ or facilities that promote mental health and well-being among students.	Access to Essential Services	• Number of students who have received financial aid • Building user-friendliness rating for persons with disabilities, the elderly, families with young children, and expectant or nursing mothers, according to the BCA Universal Design Rating scheme

Appendix 4 - Alignment with the ASEAN GBS, ASEAN SBS and ASEAN SUS

We have provided a supplementary opinion on the framework's alignment with the ASEAN GBS, ASEAN SBS and ASEAN SUS, as defined in the Scope section of this report. This Appendix covers requirements in the ASEAN GBS, ASEAN SBS and ASEAN SUS that extend beyond the requirements in ICMA's Green Bond Principles 2025 and Social Bond Principles 2025 (the "Requirements"). Commensurate requirements that exist in both the abovementioned ICMA principles and ASEAN standards have been assessed in the Alignment with Principles section of this report. As detailed in this Appendix, we consider the framework to align with the ASEAN GBS, ASEAN SBS and ASEAN SUS.

Issuer and issuance

» In line with the Requirements, the issuer is incorporated in an ASEAN member country and the instruments issued under this framework will originate from an ASEAN member country.

Use of proceeds

» In line with the Requirements, fossil fuel power generation projects and projects which involve activities that pose a negative social impact related to alcohol, gambling, tobacco and weaponry are excluded from financing under the framework.

Process for project evaluation and selection

» In line with the Requirements, the issuer confirms that the process for project evaluation, the use of proceeds and the external review report on the process will be made publicly available through a website designated by the issuer, at the time of issuance and throughout the tenure of the instruments issued under this framework.

Management of proceeds

» In line with the Requirements, the process for managing the net proceeds from the instruments issued under this framework will be disclosed to investors in the documentation for the issuance of the instruments.

Reporting

» In line with the Requirements, the issuer confirms that it will provide annual reporting on the use of proceeds until full allocation and the external review on the annual reporting to investors through a website designated by the issuer, throughout the tenure of the instruments issued under this framework.

Endnotes

1 Point-in-time assessment is applicable only on date of assignment or update.
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25 Pioneering sustainable water management for a better future, SMU Engage, 17 April 2023
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32 Universal Design index Self Assessment Framework, Building and Construction Authority, accessed 27 May 2025

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