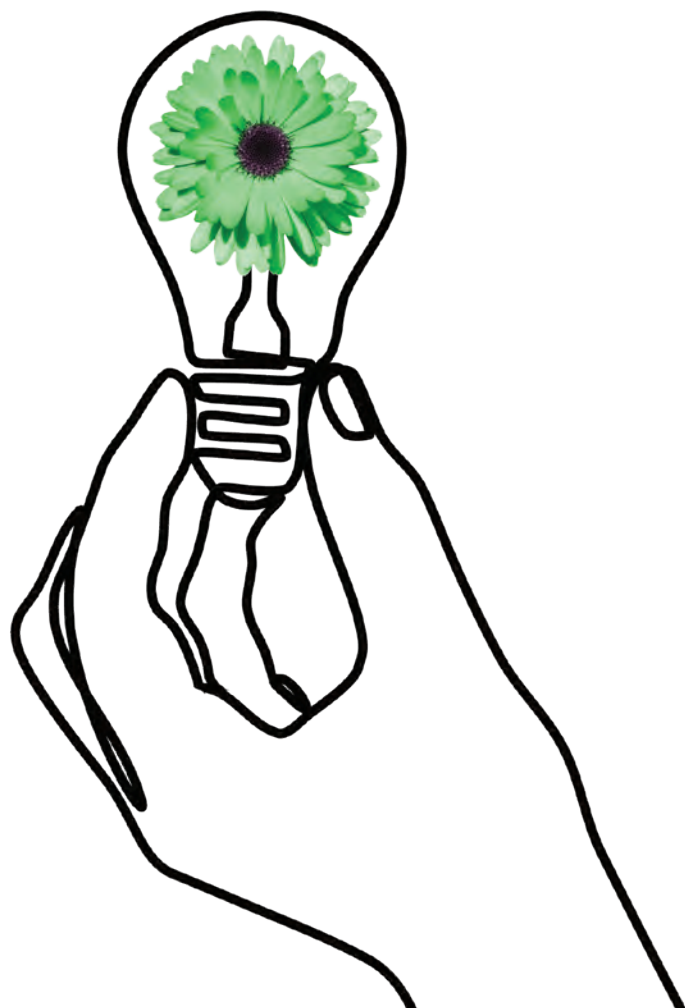
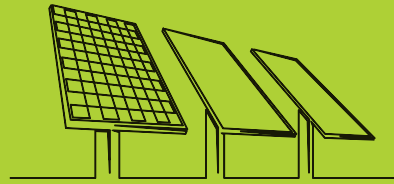


Adopting Innovative Ideas



for a Sustainable Future



Since its establishment in 2000, SMU has been committed to the sustainable development of a clean, green and healthy environment for SMU students, faculty and staff as well as neighbouring communities, businesses, residents and visitors. Since the opening of the City Campus in 2005, conceived as a “campus in the park”, SMU has been winning awards and achieving major environmental certifications and standards.

In the University’s strategic plan SMU2025, Sustainable Living has been identified as one of the three key priorities that the University would develop as an area of particular cross-disciplinary strength. SMU’s ambitions in this strategic priority include driving solutions to manage climate change, promoting sustainable city living, and enhancing quality of life.

These goals will be achieved through SMU’s educational and research programmes, as well as engagement with its stakeholders and communities-at-large. In fact, SMU’s expertise in such cross-disciplinary research intersects with the future needs of Singapore, the region, and the world, and is also where its potential for impact is the greatest.







MAJOR CERTIFICATIONS AND STANDARDS

On its City Campus, SMU's green journey included improving energy and water efficiency as well as other initiatives which led to various Green Mark Certifications and WELL Building certification namely:

-  Green Mark Platinum Certification for its campus schools and buildings
-  Green Mark Platinum Certification for Prinsep Street Residences
-  Green Mark Platinum Certification for SOSS/CIS (Super Low Energy Building)
-  Green Mark Platinum Certification for SMU Connexion (Net Zero Energy Building)
-  WELL Pre-certification for SMU Connexion by International WELL Building Institute

AWARD-WINNING SUSTAINABILITY

SMU's sustainability initiatives have earned numerous significant awards over the years including:

-  2005 LIAS Award of Excellence — Gold Award by LIAS (Campus)
-  2010 Green Mark Platinum by BCA (Admin Building)
-  2011 Green Mark Gold by BCA (Campus)
-  2014 Water Efficient Building — Gold Award by PUB (Campus)
-  2015 Green Mark Platinum by BCA (Campus)
-  2016 Community in Bloom Awards — Gold by NParks
-  2016 Energy Efficient National Partnership Awards for Excellence in Energy Management (Category) by EMA, NEA, EDB
-  2016 Leadership in Sustainable Design & Performance Award by SGBC-BCA (Campus)
-  2016 ASEAN Best Practices Award-Energy Efficient Regional Buildings by ASEAN Centre for Energy (Campus)
-  2017 Cities of Love Awards 2017 — Distinguished Award: As recognition for loving your city by Inception (Environment Category)
-  2018 Community in Bloom Awards — Gold by NParks
-  2018 Singapore Environment Achievement Award (Public Sector) by Singapore Environment Council (Campus)
-  2018 ASEAN Best Practices Award-Energy Efficient Regional Buildings by ASEAN Centre for Energy (Yong Pung How School of Law (YPHSL))
-  2019 Green Mark Platinum by BCA:
 - SMU Connexion
 - > Green Mark Platinum (Zero Energy) Award
 - SMU Administration Building
 - Prinsep Street Residences
 - SMU City Campus
-  2020 Green Mark Platinum for School of Social Sciences/College of Integrative Studies (Super Low Energy Building) by BCA
-  2021 Energy Efficiency National Partnership (EENP) for Best Energy Efficiency Practices in the Public Sector (Organisation) by EMA, NEA and EDB
-  2022 SGBC-BCA Leadership in Sustainability Awards 2022
 - Business Leadership in Sustainability — Transformation Award Category — Singapore Management University
 - Building Project Leadership in Sustainability — Carbon Performance Award Category — SMU Connexion
-  2022 ASEAN Energy Efficiency and Conservation Award
 - Zero Energy Building — Energy Efficient Category — SMU Connexion

With the four awards won at the BCA Awards 2019, SMU has achieved 100% Green Mark Platinum status for its entire campus.

SUSTAINABILITY PERFORMANCE

Sustainability Awards

SMU won the Business Leadership in Sustainability Award at the SGBC-BCA Leadership in Sustainability Awards 2022. The biennial Awards, co-organised by the Singapore Green Building Council (SGBC) and the Building and Construction Authority (BCA), aim to recognise organisations that have meaningfully embraced sustainability into business operations, products and solutions and are beacons of sustainability leadership within their industry.



SMU Connexion also won another award at the SGBC-BCA Leadership in Sustainability Awards 2022 in the “Carbon Performance” sub-category of the Building Project Leadership in Sustainability, which is given to building projects that have undertaken substantial action to minimise their operational and embodied carbon emissions and taken steps to reduce their carbon footprint at each stage of the project.

- 1 SMU Vice President of Campus Infrastructure and Services Mr Sundaravadivelan Selvam (2nd from right) received the Business Leadership in Sustainability Award from Ms Grace Fu, Minister for Sustainability and the Environment at the SGBC-BCA Leadership in Sustainability Awards 2022. With them are Mr Tang Kok Thye, President of Singapore Green Building Council and Mr Kelvin Wong, Chief Executive Officer of Building Construction Authority.
- 2 Ms Bharathy G Shanmugam (2nd from right), Head-Campus Development, OCIS, received the Building Project Leadership in Sustainability Award from Ms Grace Fu, Minister for Sustainability and the Environment.



School of Social Sciences and College of Integrative Studies

The School of Social Sciences/ College of Integrative Studies building (SOSS/CIS) began operation in June 2022. This “Super Low Energy” building has numerous sustainability features that includes passive self-shading features, mass engineered timber (MET) structure, roof-top solar farm, mini district cooling system, enhanced passive displacement cooling (EPDC) system, converged power system (CPS), dynamic lightings and SMART building control system.

Multi-disciplinary and Knowledge Exchange Research (MAKER) Workshop Series (Sustainability-themed workshops)

The Office of Research and Tech Transfer (ORTT) has also been leading a new Multi-disciplinary and Knowledge Exchange Research (MAKER) Workshop series to facilitate the exchange of ideas amongst SMU faculty members who may share intellectual synergies in their respective

areas of work. The MAKER workshops are designed to purposefully catalyse multidisciplinary collaborations across the University.

- Three sustainability-themed workshops have been organised to-date – and successfully involved a total of 23 faculty members across schools. The themes are:
 - > Food Sustainability/ Security
 - > Sustainable Food Operations
 - > Sustainability: Financing, Governance & Regulation

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3 The newly opened School of Social Sciences and College of Integrative Studies building attains BCA's Super Low Energy Status.

SMU SUSTAINABILITY POLICY AND TARGETS 2017-2021

ENERGY



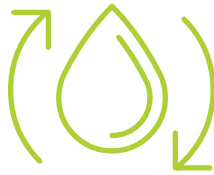
Reduction in energy intensity by

42%

by 2021
(baseline year 2006).

Target fully achieved.

WATER



Reduction in water index by

31%

by 2021
(baseline year 2011).

Target fully achieved.

HEALTH & ENVIRONMENT

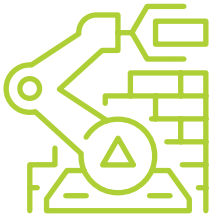


Adopt WELL standards.

SMU Connexion is the first project in Singapore to obtain WELL Pre-certification.

Target fully achieved.

BUILT ENVIRONMENT



Use Mass Engineered Timber (MET) & similar sustainable construction materials.

SMU Connexion and SOSS/SIC

Completed

WELLNESS



Totally smoke free since 1 January 2018.

Completed

INNOVATION & SMART SOLUTION



Enhanced passive displacement cooling (EPDC) & smart controls.

Fully Deployed in Prinsep Street Residences (PSR), SMU Connexion, and SOSS/CIS.

Completed

SUSTAINABLE PROCUREMENT








Lifecycle-based green procurement.

Ongoing


PROGRAMMES, RESEARCH & OUTREACH

Programmes in Sustainability



-  12 Sustainability courses under Professional & Continuing Education
-  Sustainability Track as part of the Master of Science in Management programme
-  Climate change and sustainability electives within SMU's undergraduate Core Curriculum.
-  2nd Major in sustainability for undergraduates
-  Employing SMU'S Solar Farm as a Pedagogical SMU-X Project

Research in Sustainability

Sustainable Business Operations:

-  Supply Chain Risk Resiliency Project for Supply Assurance/Procurement and Logistics, and On Demand Delivery Assignment Recommender


Sustainable Urban Infrastructure:

-  UN Intergovernmental Panel on Climate Change (IPCC) report, on "Cities, Settlements and Key Infrastructure" and "Cities and Settlements by the Sea" published in Feb 2022
-  In partnership with A*STAR's National Metrology Centre (NMC) SMU is test-bedding energy-efficiency Indoor Air Quality (IAQ) sensor network for localised ventilation control in SMU

Sustainable Agro-Businesses & Food Consumption:




-  Fostering Change in Our Foodways: The Perception and Acceptance of Alternative Proteins Among Consumers in Singapore
-  Understanding China's Agricultural Modernisation and Rural Development

Sustainable Finance




-  Singapore Green Finance Centre, Singapore's first research institute dedicated to green finance research and talent development

Outreach in Sustainability

Community Engagement:

-  Project Midori involves a team of students working towards food waste minimisation through various engagement platforms and activities. The objective is to raise awareness of the environmental issue of food waste to the SMU community.
-  Project Stop Single-Use Disposables (SSUD) is a student-led community service project that aims to increase the level of environmental sustainability awareness of the SMU community through a series of activities to encourage the adoption of new habits to reject single-use items.
-  SMU Library and C4SR's Project Midori in partnership with Ya Kun conducting an inaugural case-writing competition to address food wastage and identify best practices.







ENERGY EFFICIENT CAMPUS

-  Net Zero Energy building SMU Connexion
-  Super Low Energy Building SOSS/CIS
-  100% Green Mark Platinum Campus (Including PSR)

ELECTRIC VEHICLE CHARGING

Increasing the number of charging stations from 2 to 7 numbers to support the use of green energy by electric vehicles.

REDUCE & RECYCLE

-  80% F&B tenants adopt e-ordering
-  100% F&B tenants offer e-payment
-  100% e-forms for conference application
-  Eliminate the single-use plastic carrier in all SMU retail stores since April 2022
-  715,971 plastic bottles saved by water dispensers in YPHSL, SMU Connexion and Admin Building
-  Approximately 85% reduction in paper consumption (baseline 2017) with 30% paper recycled in 2021

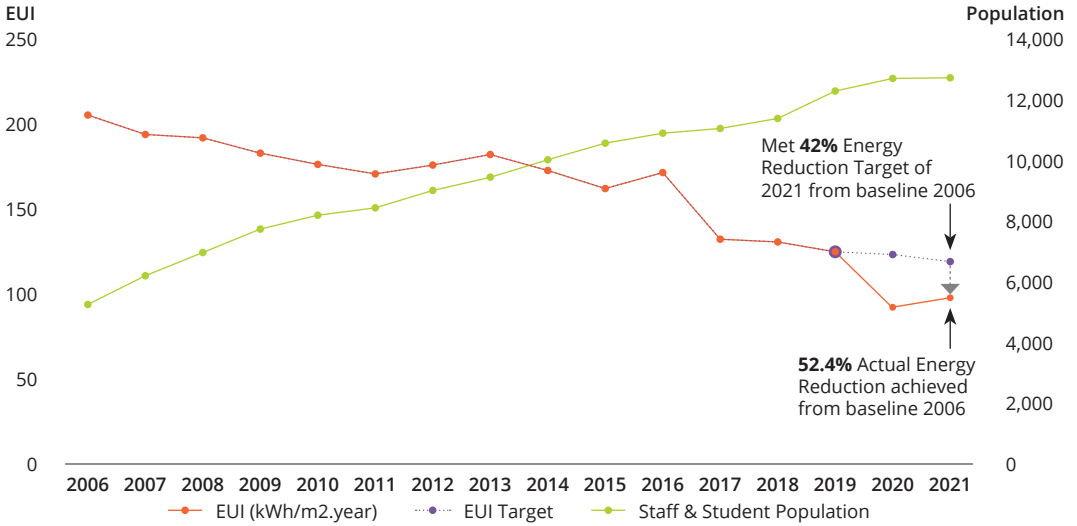
GREEN ENERGY

SMU continues our commitment to

100% Green Energy since April 2020.

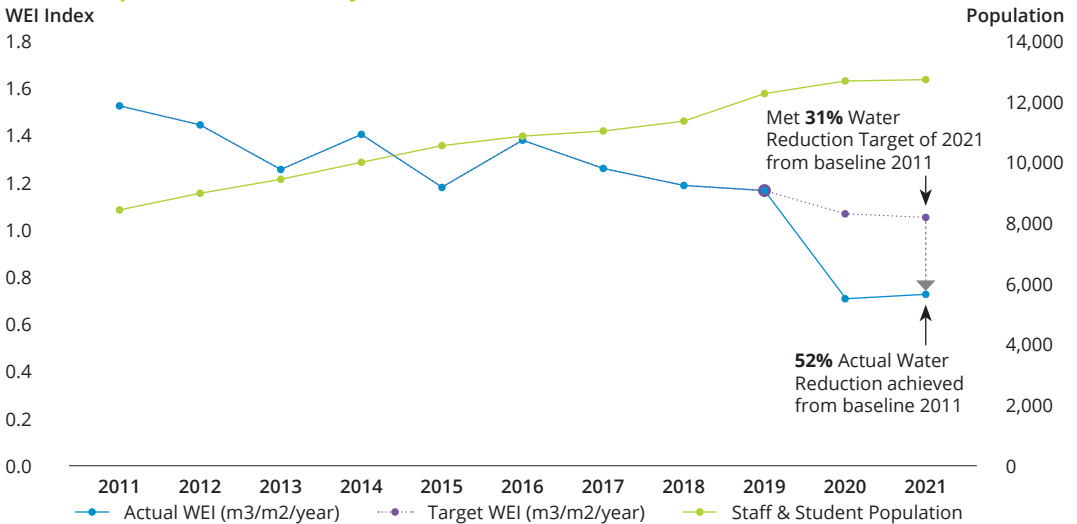
ELECTRICITY CONSUMPTION

SMU Campus Energy Utilisation Index Performance 2006-2021



WATER CONSUMPTION

SMU Campus Water Efficiency Index Performance 2011-2021



ELECTRICITY SAVINGS
2006-2021

57,566,303 kWh
(Savings)

- Energy cost savings **\$10.3m**
- Electricity consumption reduced by **52.4%**

Savings equivalent to energy consumption by **~990** units of 5-room HDB flats for 10 years

WATER SAVINGS
2011-2021

294,430 CuM
(Savings)

- Water cost savings **\$0.595m**
- Water consumption reduced by **52%**

Savings equivalent to **117** Olympic-sized swimming pools

SOLAR POWER PLANT

1.98MWp

- Solar farm in Campus – Largest in city centre
- Area of Solar Farm is equivalent to **~1.5** football fields

~12% reduction in annual energy consumption

SMU SUSTAINABILITY BLUEPRINT

In 2022, SMU will put in place the SMU Sustainability Blueprint which not only supports SMU Vision 2025 but is also aligned to the principles of the Sustainable Development Goals developed by the United Nations. The Blueprint gives the University a distinctive opportunity to articulate why sustainability is critical not only to individuals, as corporate citizens, but also for SMU, as a university whose core mission is to deliver transformative education and engage in cutting-edge research that serves the global community.