

The Singapore Green Building Council (SGBC) and Real Estate Developers' Association of Singapore (REDAS) are pleased to bring to you a joint seminar to discuss the possibilities for buildings in a low-carbon economy.

The Net Zero Concept is the next logical step in the evolution of our buildings, and the seminar will share insights on Singapore's carbon strategy, the differences between terminologies in the Net Zero space, as well as practical knowledge on efficient passive building design, carbon credit opportunities and the upcoming carbon tax.

THE FUTURE OF BUILDINGS SEMINAR SERIES:

TOWARDS ZERO ENERGY & CARBON NEUTRALITY

4 April 2018

2:00pm to 5:30pm

SGBC or REDAS
Member : \$80

Non-Member : \$120

[Inclusive of GST]

PEB PDUs : PENDING
BOA-SIA POINTS : PENDING

M Hotel

81 Anson Road, S(079908)

[Banquet Suite - Level 10]

Nearest MRT : Tanjong Pagar Station

Jointly organised by :



Event Partner :



Event in support of :



Programme

- 1:30pm Registration
- 2:00pm Opening Remarks
- 2:15pm **Singapore's Strategy & Progress on Climate Change**
Ms Pamela Lee - Director (Policy & Planning, Climate Change),
National Climate Change Secretariat, Strategy Group,
Prime Minister's Office
- 2:45pm **Understanding Net Zero**
Ms Soh Yi Hui - Manager, Market Insights, Singapore Green Building Council
- 3:15pm **Advancing Net Zero : A Global Project**
Ms Joelle Chen - Regional Head of WorldGBC's Asia Pacific Network
- 3:45pm **TEA BREAK**
- 4:15pm **Building Carbon Footprint : Measuring & Reporting**
Mr Thirumalavan Panchaksharam - Manager, C&W Services (S) Pte Ltd
- 5:00pm **Design Strategies in pursuing Zero Energy**
Mr Tan Szue Hann - Head of Sustainability, Surbana Jurong,
Chairman, Sustainability, SIA & Board Member, SGBC
- 5:30pm End of Seminar

Pamela Lee
Director (Policy & Planning, Climate Change),
National Climate Change Secretariat, Strategy Group,
Prime Minister's Office

Ms Pamela Lee is the Director of the Policy and Planning Division at the National Climate Change Secretariat, Strategy Group (SG-NCCS) that is under the Prime Minister's Office. She leads the policy and planning team to direct whole-of-government efforts to develop and implement Singapore's response to climate change, and advance our interests on the international stage.

Prior to joining SG-NCCS, she has held appointments in various ministries such as the Ministry of Trade and Industry, the Ministry of Community, Youth, and Sports (now known as the Ministry of Social and Family Development), the Ministry of Manpower, and the Public Service Division. Pamela has experience in a range of domain areas including trade, community care & social support, early childhood development, workplace policy & strategy, and public sector leadership development. She has a bachelor's degree in Economics from the University of Cambridge.

Singapore's Strategy & Progress on Climate Change

Singapore has come a long way in our efforts to reduce GHG emissions, for example with the switch to natural gas in the early 2000s that constitutes more than 95% of our fuel mix for electricity generation today. Ambitious actions across all sectors are needed to help Singapore transform into a low-carbon economy, and achieve our commitment to reduce emissions intensity by 36% below 2005 levels by 2030, and stabilise emissions with the aim of peaking around 2030. While the building sector's energy intensity has improved in recent years, energy demand has also continued rising. What opportunities are there for the buildings sector to reduce emissions? This presentation will give an overview of the global momentum in climate action, Singapore's strategy and progress in tackling climate change, including insights on the upcoming carbon tax.



Ms Soh Yi Hui
Manager, Market Insights
Singapore Green Building Council

Yi Hui is a Manager (Market Insights) of the Singapore Green Building Council (SGBC), responsible for market analysis, research and strategy development work. As an industry organisation with public and private representation set up in 2009 to propel Singapore's building and construction industry towards environmental sustainability, Yi Hui is tasked with a cross functional role in SGBC, to develop insights to strengthen SGBC's core capabilities and shape new industry engagement strategies.

Prior to joining SGBC, Yi Hui was a senior industry development officer in the Economic Development Board of Singapore overseeing the Building and Infrastructure sector. She was involved in the account management of MNCs and cultivation of new business leads. As a key member of the Smart Sustainable Cities team, she was also responsible for sustainability initiatives across industry clusters, management of testbed projects and policy consultations across government agencies.

Understanding Net Zero

Buildings account for about 30% of global greenhouse gas (GHG) emissions today, and the race is on to decarbonize by 2050. However, no international consensus has been reached on the definitions of a Net Zero Energy Building (ZEB), a Net Zero Carbon Building (ZCB) and even a Carbon Neutral Building (CNB), just to highlight some of the terminologies used in this space. How these terms are defined can affect significantly the way buildings are designed to achieve the set goal. Through examining definitions of ZEB, ZCB and CNB by major organisations globally, this presentation will give an overview of the key differences between them.



Ms Joelle Chen
Regional Head of WorldGBC's Asia Pacific Network

Joelle is the Regional Head of WorldGBC's Asia Pacific Network of member Green Building Councils in 15 countries. She focuses on advancing net zero carbon buildings, advocating for healthier buildings that support wellbeing and productivity, and strengthening the green building business case for investors in the Asia Pacific context, among other initiatives.

Trained and practiced as an architect, she thrives in the intersection of design, sustainability, innovation and business. Prior to WorldGBC, Joelle was heading up the Smart Sustainable Cities team at the Singapore Economic Development Board, part of the Singapore Government.

Her expertise was in catalyzing public-private partnerships through Living Lab innovation platforms, and breaking down complex urban issues into actionable strategy. She is particularly interested in the people-side of innovation – how effective change management can bring about lasting business impact.

Joelle is passionate about advocating for green buildings, for everyone, everywhere.

Advancing Net Zero : A Global Project

Advancing Net Zero is World Green Building Council's global project which aims to promote and support the acceleration of net zero carbon buildings to 100% by 2050. Significant progress has been made since its launch in 2016, with 15 participating Green Building Councils globally that have developed action plans and are working towards or have launched national net zero certifications. This presentation will share on WorldGBC's Theory of Change for achieving this ambitious goal, what are the key guiding principles behind participating councils' approach to advancing net zero carbon buildings within specific markets, as well as case studies of Net Zero buildings across the world.



**Mr Thirumalavan Panchaksharam ,
Manager, C&W Services (S) Pte Ltd**

Thiru is a Manager at Energy & Sustainability team at C&W Services (S) Pte Ltd. His main responsibility is in the area of energy and environmental related services. This includes the provision of consultancy services in Sustainability reporting, Climate change advisory, Carbon trading, Carbon footprint, Emission monitoring and Implementation of ISO Management Systems such as 9001 (Quality), 14000 (Environment), 50001 (Energy) and 14064 series (GHG Management).

Prior to joining C&W Services, Thiru worked with Biosphere Capital and Asia Carbon Exchange as a senior carbon consultant. He was involved in the development of various types of CDM/VCS projects including renewable/non-renewable, fuel switch, waste handling & disposal and energy efficiency projects as well as carbon foot-printing services in Southeast Asian countries.

Building Carbon Footprint : Measuring & Reporting

Buildings are responsible for an enormous amount of resource consumption, accounting for over 30% of global energy consumption and almost 28% of GHG emissions. Buildings-related carbon emissions have continued to rise by around 1% per year since 2010. According to the UNEP Global Status Report (2017) published by the International Energy Agency (IEA), investments in energy-efficiency measures and low-carbon heating & cooling technologies would reduce final energy demand in buildings by 25% over current levels. Thus, the building sector can play a major role in reducing the threat of climate change, and green buildings, therefore, have tremendous potential.

As carbon dioxide is considered to be the major contributor to the greenhouse effect and climate change, the Carbon Footprint represents one of the most relevant indicators of building environment sustainability. This seminar will provide a brief introduction to carbon footprinting, as well as practical insight and local case studies in measuring, monitoring and reporting of carbon emissions of an organisation. It will also examine what carbon credits are and their uses in the reduction/off-setting of carbon emissions.



Ar. Tan Szue Hann
Head of Sustainability, Surbana Jurong
Chairman, Sustainability, SIA
Board Member, SGBC

Ar. Tan Szue Hann, M. Arch, is Head of Sustainability at global infrastructure and building consultancy Surbana Jurong. He is also Singapore's 2015-16 Young Green Architect of the Year, awarded by BCA and SGBC.

Szue Hann graduated with a Master of Architecture from NUS, completing his Thesis in UCLA in 2007, and a Bachelor of Arts in Architecture (First Class Honours) in 2006. He is also a Registered Architect with the Board of Architects, Singapore, and a Board Member of the Singapore Green Building Council (SGBC). He is also a Council Member of the Singapore Institute of Architects (SIA), as Chairman of Sustainability. Szue Hann is also a member of the BCA Young Leaders Programme.

Szue Hann has also been a speaker and moderator at several local and international conferences. In 2016, he was appointed a World Cities Summit Young Leader by the Ministry of National Development, and elected as the Chairman of the ARCAAsia Committee for Young Architects.

In 2017, he was selected as a member of Generation T, a committee of society influencers below the age of 40, by Singapore Tatler.

His work with Surbana Jurong is in sustainable and smart urban environments in Singapore and the region, having completed recently-launched BCA SkyLab, a state-of-the-art rotatable test bed for future smart and sustainable building technologies. He is also working on a cycling-friendly housing estate in Singapore, and greening new and mature townships. He believes that projects can be driven by sustainability, along with value, innovation and passion – supplemented with new technologies.

Design Strategies in pursuing Zero Energy

With the Carbon Tax being introduced in Singapore, and it being the Year of Climate Action, it has now become both a social and environmental responsibility to design for self-sustaining buildings – buildings which can harness as much energy as they consume.

The talk looks at how new strategies in design can lead towards a Zero Energy Building, and also zero-energy master plans and cities, with live examples from the speaker's work at the Sustainability group at Surbana Jurong.

It also addresses how the professions of architecture and engineering are set to evolve, from creating workable buildings that mitigate the effects of the climate, to buildings that actually pre-empt against climate change.