



Talk on “GBI & Green Buildings: The Goal and Challenges Ahead”

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On 9th July 2016, Ir. Chen Thiam Leong has delivered the talk titled “GBI & Green Buildings: The Goal and Challenges Ahead” to a crowd of approximately 50 people at Wisma IEM. This is yet another Saturday Talk Fever’s initiative by the Electrical Engineering Technical Division.

According to Ir. Chen Thiam Leong, sustainable development is needed in the built industry. Energy efficiency can be deemed to be the prelude to sustainability having MS1525 being developed in 2001 and incorporated in the late 2012. Holistic design approach by all relevant players in the design is needed to realise the sustainable (green) agenda.



Speaker

He also quoted Brundt in defining sustainable development as the “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” in the year 1987. Generally, buildings today guzzles about 1/3 of the world’s resources. Green or sustainable building is designed to save energy and resources, harmonise with the local climate, sustain and improve the quality of human life, optimize the use of building resources as well as to send the right message about the company that it is committed to the future. Hence, integrated design is the key in green building and this design encompasses factors such as climate, energy and water, environment and ecology, planning and design of community, transportation and connectivity, building and resources and business and innovation.

Site-planning and consideration of the micro-climate factor to reduce temperature difference between interior and exterior of a building is highly recommended in order to enhance the sustainability of the building. Lack of greenery in housing which leads to the intensification of urban heat island effect is the catastrophe caused by negligence of consideration of the micro-climate factor.

Sustainable technologies enable us to realise our green goals. Examples of sustainable technologies applicable to built environment include infra stormwater management, supertall and megatall buildings harnessing coolth at high zones, self-sustaining neighbourhood, retrofit stock, concrete calcination clinker, condensate harvesting, gravity fed sprinkler and wet rise systems, net zero energy green buildings, recycled materials, biodegradable paint (low volatile organic compound products), heatpipes, light tubes, water efficient fixtures, active façade, solar thermal cooling, cool roofs, proprietary system formworks, grey and black water recycling

Energy efficiency is the goal of efforts to reduce the amount of energy required to provide products and services. However, it is strongly advised for such efforts to be acclimatized for local applications. In tropical country like Malaysia, careful thoughts have to be in place in deciding whether to implement sustainable technologies such as evaporative cooling, chilled beam/slab, underfloor air distribution (ufad) and low level displacement or also known as thermal displacement ventilation. Exploration of solar thermal cooling, active façade the concept of net zero energy building are additional examples with the common goal of improving the sustainability of built environment.

Having such vast array of sustainable technologies available, the next question to ponder upon is how can we measure the effectiveness of such technologies? Green Building Index (GBI) is a tool which can be used to answer such question as it is developed specifically for tropical country. GBI harmonises with local practices, culture and the local environment, reflects local priorities, availability of local resources and local challenges as well as incorporates high priority global challenges whilst accommodating the capacity of the ecosystem at local levels. Among the various green tools globally, GBI is the only one which was developed by regulated professionals. Facilities rated in GBI radar are done based on energy efficiency, indoor environmental quality, site management, material and resources, water efficiency, and innovation.

With the strong global awareness on the catastrophic effects of global warming, the so-called green sustainable technologies have been researched and implemented with more intensified efforts as time progresses. The evaluation of the effectiveness of such technologies is crucial and GBI will be further enhanced as time goes by.



Token of appreciation to speaker