The SLEB Smart Hub: Encouraging Green Technology Through Knowledge

Previously known as GBIC (Green Buildings Innovation Cluster) Repository, the SLEB (Super Low Energy Building) Smart Hub is an initiative taken on by the BCA (Building and Construction Authority) to get companies to reduce their carbon emissions. Through the SLEB Smart Hub, BCA aims to foster collaborations amongst the research community to bring the latest green building technologies to different industries.

What is the objective of the SLEB Smart Hub?

The SLEB Smart Hub is a one-stop platform for companies that are looking to improve their carbon footprint, but lack the expertise and technology to do so. Through the SLEB Smart Hub, information provided by industrial experts are collated and shared throughout all industries. With the help of other SLEB SmartHub members, all users will be able to play a part in saving the earth.

Users can also access and obtain insights on information such as energy savings and costs. These provided statistics are backed up by validated data and analysed results to deliver the best technology for each respective industry.

In line with these efforts, a new energy performance standard has been introduced for buildings in Singapore. Known as the 'Green Mark for Super Low Energy Buildings (SLEB)', this new rating seeks to encourage energy reductions for non-residential buildings.

Benefits of the Green Mark standard

Meeting the Green Mark standards will benefit you in several ways. First and foremost, you can expect to see an improvement in the quality of your indoor environment, promoting a healthier living/working space.

A far-reaching benefit of meeting the Green Mark standard is that you will be playing a part in reducing the negative impact that comes with the burning of fossil fuels.

There's a tangible prize too: as a reward for reducing your energy intake, you can get to enjoy the benefits of a lower utility bill.

If you're wondering how to get started, all you have to do is to visit the SLEB website to register for an account.

Why is it important to have green technology?

As of 2014, over 50 million tonnes of greenhouse gases have been produced by Singapore, with the bulk of it stemming from the burning of fossil fuels. Of this amount, over 95% of it consists of carbon dioxide, with the remainder being made up of chemicals such as methane, perfluorocarbons, and nitrous oxide. The energy produced goes towards powering industrial sites, buildings, households, and vehicles, amongst some others.

These greenhouse gases trap outgoing energy, causing the heat to be retained in the lower atmosphere and warming the Earth. And, as any Singaporean knows, a hotter climate is *not* good news.

Currently, the building sector accounts for approximately a quarter of Singapore's overall carbon emissions. In an effort to drive down the amount of greenhouse gases produced and fight climate change, Singapore has begun to introduce new standards to the construction of their buildings. The goal is to raise the percentage of green buildings in Singapore from 36% to 80% by 2030.

Key features of the SLEB Smart Hub and how they can help you

The SLEB Smart Hub has a wide variety of features to help turn your building into a Super Low Energy Building.

Technology Directory

Light Emitting Glass (LEG) is one of the technologies you can explore in the SLEB Smart Hub database

Apart from an extensive building database, the SLEB Smart Hub also includes a Technology Directory. Those unfamiliar with the latest energy-efficient technologies will be able to learn more about the various appliances they can use to reduce their energy usage.

The database is separated into categories such as lighting, energy generation and storage, and indoor environmental quality. The other categories available are:

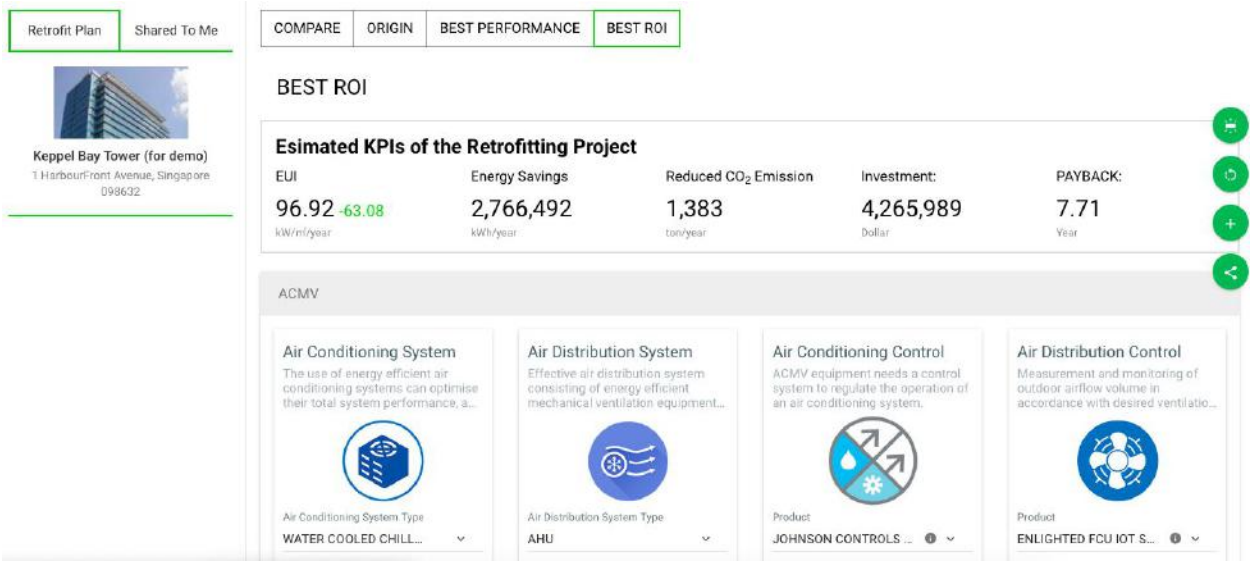
- ACMV (Air-Conditioning & Mechanical Ventilation)
- Facade and Envelope
- Controls and Operations

- Loads
- Others

It also includes a selection of the more popular technological appliances that are used by their clients. This can come in helpful if you want to make a quick choice - however, do note that it is still important to conduct some research before acting. Different industries tend to favour different types of technology; for example, hotels, which have to operate around the clock, may not appreciate having smart lights that turn off and on all the time.

The database will be expanded as more advancements are made, allowing users to have a constant stream of updated technology.

Smart Advisor

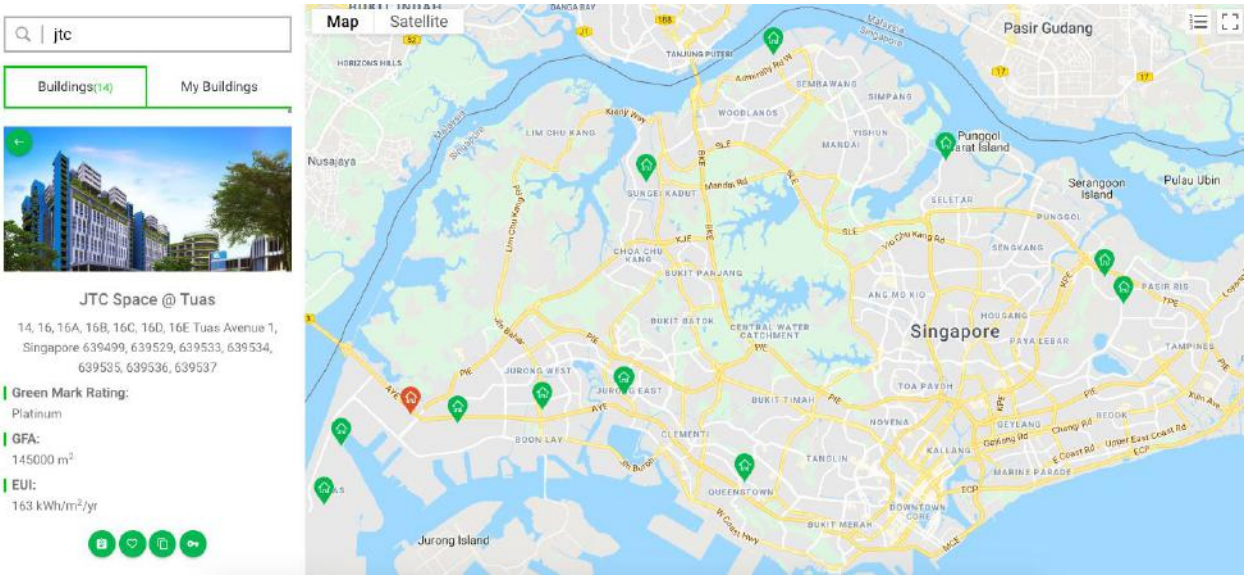


The Smart Advisor provides data on retrofitting options, costs, and benefits

If something has caught your eye, but you're unsure of how well your chosen technology will perform, SLEB Smart Hub has got your back. The Smart Advisor helps building owners and developers to choose and evaluate their selected technologies, as well as plan for any retrofitting exercises that might take place.

Here, you can get the statistics on your estimated EUI (Energy Use Intensity), Energy Savings, CO2 Emissions, Investments, and the Payback per year.

Building Database



Find out key energy-related information on buildings in Singapore

The SLEB Smart Hub also plays host to the largest building database in Singapore. Through it, you can gain access to various features of a building, such as its Green Mark Rating, Ground Floor Area (GFA), and EUI. With energy information now more accessible than ever, the SLEB Smart Hub envisions for building owners to take a greater interest in the performance of their own buildings.

Statistics and information on energy consumption and technology adoption

SLEB Smart Hub also includes an interactive dashboard that provides statistical data on energy efficiency. This dashboard allows users to check the technologies used by different industrial facilities, such as hotels. It also shows the amount of energy that can be saved by utilising these said technologies.

Data Dictionary

The Data Dictionary provides layman definitions for the data terms and fields that are commonly used in the industry. This helps newer users to understand industrial jargon more easily, and to ensure that they do not misunderstand or underestimate the importance of energy efficiency.

Tackling climate change: A shared responsibility

With global warming posing an ever-present threat, increasing the number of Super Low Energy Buildings in Singapore is a vital step in going green. For those who do not have any say in building design but still wish to help, there are still ways that you can contribute to a greener world. Little acts such as composting your used food waste and avoiding single-use plastics will all help towards making our Earth a better place to live in.