

# The Smart Advisor: Make Smarter Energy Decisions

## THE SMART ADVISOR

**Leverage BCA's database and make smart energy decisions**



Get **recommendations on the best technology** for your building



See how much it **costs** and how much you can **save**



Make **better decisions** in your plans



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**The Smart Advisor is also able to perform **Benchmarking****

**Compare** your building's performance data against others



**Get recommendations** to boost your building's performance



**Identify gaps** in efficiency based on similar variables



**See where** your building stands in terms of efficiency





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The world's climate is changing rapidly. Due to global warming, there is a growing need to reduce our carbon footprint in order to protect our environment. One such way we can do that is by making our buildings more energy efficient.

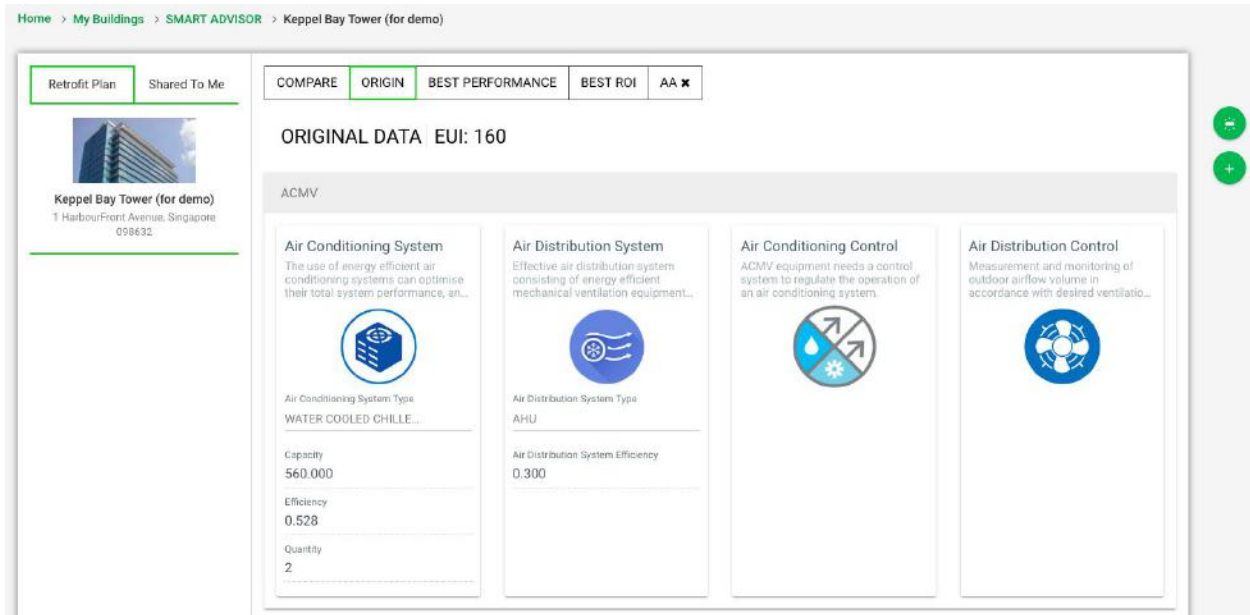
[The SLEB Smart Hub](#) is an initiative by the [Building and Construction Authority \(BCA\)](#) to encourage more Super Low Energy Buildings in Singapore. It functions as a one-stop hub for building owners who want to reduce their carbon footprint, but may experience difficulties in doing so. It provides several resources to help building owners get started in the right direction.

Building owners of today have many energy-efficient technologies and products at their disposal. The [Super Low Energy Building \(SLEB\) movement](#) is also gaining momentum in Singapore. But how will building owners know which products or systems are worth the investment? This is where the SLEB Smart Hub's Smart Advisor comes in.

## The Smart Advisor's Features

[The Smart Advisor makes](#) use of the Hub's large database on Green Mark buildings in order to provide estimates of what it would cost to retrofit a building, and its potential energy savings. The Smart Advisor is able to recommend users what technologies would work best based on the building information that is provided. Through the Smart Advisor, those keen to go green can understand the costs and effects of adopting this technology easily.

It is able to estimate not only the upfront cost and potential energy savings, but also the payback period should these recommendations be applied. Building owners and developers will be able to make better decisions early on when planning Super Low Energy building projects.



## Using the Smart Advisor

The Smart Advisor is accessed through the [Building tab](#) after logging into the SLEB Smart Hub portal. The screen displays several additional tabs, which will allow you to view the relevant data at a glance. From this screen, you can configure several systems - for example, under **ACMV**, you have several options: Air Conditioning System, Air Distribution System, Air Conditioning Control and Air Distribution Control.

You are able to choose a specific product or technology, and a tooltip displays a brief description of your chosen product. Expanding the tooltip will take you directly to a detailed listing of the product, which will provide you with the manufacturer's details, the product's basic information and specifics, as well as features. Any relevant documentation for the product is also included.

Once you have configured a test plan, you can save it and have the Smart Advisor analyse it for you. It will then display the expected performance KPI based on your input. Alternatively, if you want the hard work done for you, you can click on **Best Performance** or **Best ROI** to have the Smart Advisor recommend you the best products and technologies for each particular option. Additionally, it will display the estimated energy savings, carbon dioxide emission reduction, upfront cost, and payback years based on the products it recommends you.



### Demo Building

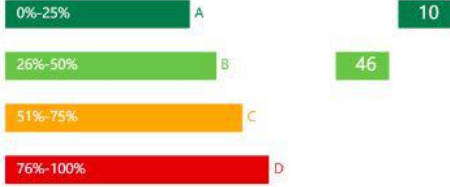
Completed in 2002, Keppel Bay Tower is an eighteen-storey commercial building comprising a six-storey podium and a basement carpark. Located within the Keppel Bay precinct, the Grade A office tower is a five-minute drive from the Central Business District. It is close to a wide range of dining and e...

- Address:**  
1 HarbourFront Avenue, Singapore 098632
- Storey:**  
18
- GFA:**  
40000 m<sup>2</sup>
- Type:**  
Public
- Position:**  
South
- EUI:**  
46
- Chiller Efficiency:**  
100
- Lighting Power Density:**  
99



Dimension	Description	Performance
EUI	EUI ranking of similar buildings	2nd Quartile
Chiller Efficiency	Chiller Efficiency ranking	Bottom Quartile
Lighting Power Density	Show the lighting efficiency	Bottom Quartile
ETTV	Wall and windows performance	Bottom Quartile
Energy Control System	Control system usage	Top Quartile

#### Energy Efficiency Rating



50 Collyer Quay | St Regis Hotel ... | orchardgateway

- Storey: 18
- GFA: 48974 m<sup>2</sup>
- Type: Mixed Development
- Position: South

From these high performance buildings we recommend some green features which may suit your building:

- Energy Efficient Lighting
- Energy Efficient Lift
- Better Glass
- Energy Efficient Air Distribution System
- Energy Efficient Lighting
- Lighting Control

#### Chiller Efficiency



#### Cooling Load Per Square Meter



## Benchmarking

Another key function of the Smart Advisor is its ability to perform benchmarking. By leveraging its database, it can show the relevant performance data of a given building against similar buildings, and buildings that are noted as “high performance”.

You can view a building’s basic details, along with more specific parameters such as various energy efficiency ratings, lighting power, and whether it has any energy control systems in place. The Smart Advisor goes one step further and offers recommendations for green features that may suit the building.

This feature is designed to tell a building’s owner where they stand in terms of energy efficiency. It also helps to identify performance gaps in a building based on variables such as size, location, number of storeys, and the type of building (eg hotel, school, or office).

## How can the Smart Advisor help me?

Perhaps you want to take steps to make your building more green and energy-efficient - but you are not quite sure of which steps to take. Building owners may feel intimidated in initiating such projects due to many factors, one of them being information overload and potential costs. The

Smart Advisor aims to make the process of starting a Super Low Energy Building project as simple as possible.

Traditionally, consultants would be required to manually identify the best-in-class green technologies for a specific building, and then design their approach based on that. However, when done manually, it can prove challenging as considerable man-hours may be required of a consultant to determine the cost and performance of the various technologies. As a result, this may incur additional costs for a building's owner.

## Smart technology for better decisions

By making use of AI via the Smart Advisor, Super Low Energy Buildings can be designed digitally and the process completely automated. The Smart Advisor can provide users with a list of recommended technologies to adopt based on the building's specifications, and building owners can be assured that the products on the list are the best-in-class. For owners who want to make doubly sure, the information available within the Smart Advisor allows them to conduct their own research on the products they are being recommended.

This cuts down on the time required to design for new and existing buildings, as it identifies which solutions are the most cost-effective while meeting SLE standards automatically. All of this means that cost savings will be passed on to the building owners. The speed and efficiency of the automated recommendations also mean that projects can proceed faster.

It is currently more important than ever that we start reducing our carbon footprint. The hope is that in the future, more and more buildings will become Super Low Energy and bring Singapore closer to its vision of a truly Green City.