In contemporary buildings, air-conditioning is part and parcel of the structure: almost every conceivable building type requires or possesses some form of air-conditioning system, whether to provide thermal comfort to human occupants or simply to keep sensitive machinery at optimum temperatures. Especially in hot and humid Singapore, air-conditioning is principally a prerequisite for most buildings.

However, heating, ventilation and air-conditioning (HVAC) systems account for 40-50 percent of a building’s energy consumption. Naturally, it is an ongoing quest to seek out products and solutions that are able to lower energy use from air-conditioning systems, which will help to lower overall energy usage and result in cost savings for the entire building. Despite the potential benefits from retrofitting - let alone overhauling - an air-conditioning system for greater efficiency, some building owners may not be very keen to undertake such a project due to cost and operational issues.

In June this year, Chinatown Point – a shopping mall cum office building first opened in 1993 – began use of its brand new, state-of-the-art air-conditioning system provided by energy service company Kaer Pte Ltd. A little different from usual air-conditioning retrofits, the solution in use at Chinatown Point is air-conditioning-as-a-service, an innovative green building solution that bears certain similarities to software-as-a-service (SaaS) distribution models used in information technology (IT) circles.

Basically, Chinatown Point has outsourced its entire chilled water production to Kaer, allowing the SGBC-accredited energy performance contracting firm to design, install, finance, monitor and operate
the chilled water system within the building for the next 10 years. As opposed to pumping in resources, capital and manpower to manage and upkeep the chilled water system from before, Chinatown Point now only needs to pay a single rate for the consumption of chilled water on a monthly basis. The building does not have to pay for repairs, maintenance, electricity and all other costs associated with the chiller water system. The new Kaer Water system also runs at a chiller efficiency of 0.60 kW/RT, which means that the system operates at the established BCA Green Mark Platinum benchmark for chiller efficiency.

Best of all, the new system did not cost Chinatown Point a single dollar to implement and install; anything associated with the new chilled water system was taken care of by Kaer.

What all these means is that the building no longer has to worry about its air-conditioning system, since it is now in the hands of professionals who are committed to ensuring the maximum operational efficiency of the chilled water system. This also frees up resources for Chinatown Point: the building owners can now commit more resources to their strategic business functions and core activities while essentially outsourcing non-core activities to a team of industry professionals at Kaer, which is tremendously valuable.

“This innovative business model, which reduces the cost of utilities while ensuring the performance of the air-conditioning system at the same time, will help to significantly improve building efficiency,” said Mr Tan Swee Yiow, President of the Singapore
Green Building Council (SGBC), “As the industry continues towards the national goal of greening 80 percent of our existing buildings, we need more of such innovative solutions as we forge ahead in our journey towards greening the built environment.”

As a SGBC-accredited energy performance contracting firm, Kaer Pte Ltd is one of close to 20 energy performance contracting firms certified by the Singapore Green Building Services (SGBS) certification scheme, the only programme in Singapore that recognises building consultants and organisations for their commitment to the green building movement. Engaging the services of SGBS-accredited energy performance contracting firms can help green building projects accrue bonus points under the BCA Green Mark Scheme, especially if the scope of work can guarantee operational system efficiency.

Additionally, building owners looking to green their buildings for greater energy efficiency can consider the SGBC-BCA Zero Capital Partnership Scheme. The Scheme provides the building owner with the expertise of an SGBS-accredited energy performance contracting (EPC) firm, which serves as a one-stop solution for both minor and major retrofit options, can provide financing options and also facilitate the application of relevant grants or incentive schemes to fund the retrofit works. Through the Scheme, the building owner can work with a proven professional firm to achieve greater energy efficiency with zero capital outlay.

As more innovative green building solutions come into play, building owners will have a wider selection to choose from to help them advance towards greener, healthier buildings.

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