

Renewables not enough? Cut demand to meet net zero, says energy management specialist

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AS VIETNAM'S green energy transition is being slowed down by supply-side factors, some renewable energy players are looking at demand-side moves to help their clients meet net zero targets.

It has been "interesting" to see how solar power developers, for instance, are reaching out to Singapore-based Barghest Building Performance (BBP), said chief executive Hoe Boon Chye.

"(For) a lot of these renewable energy generation companies, their clients have put up very aggressive targets for their own company, and there's only so much renewable energy can do," he said.

"Most of the time, renewable energy can deliver up to 70 to 80 per cent of a company's net zero target.

"(For) the rest, typically, companies will have to buy carbon credits."

The answer to net zero hence lies in achieving energy efficiency to cut overall demand, said Hoe.

As an energy management firm, BBP helps companies lower their energy costs by optimising the settings of their cooling system. Such systems contribute up to 60 per cent of a building's total energy use.

"The reason why these facilities are using a lot of energy today is that the engineering team that runs the centralised chiller plant usually do not have accurate enough data to give them the insights to adjust the equipment speed and setpoint, as the weather condition, temperature and the load condition changes throughout the whole day," he said.

A centralised water-cooled sys-



BBP helps clients save their electricity bill by using its patented software and data analytics to optimise the amount of energy they need to cool their facilities. PHOTO: BARGHEST BUILDING PERFORMANCE

tem or chiller plant includes equipment such as chillers, pumps and cooling towers, which usually operate at a fixed "setpoint".

Facilities typically leave such equipment to run at maximum speed, which wastes a lot of energy, he added.

BBP's solution – which brings together sensors, industrial controllers, instruments and software – is constantly looking for opportunities to save energy while the cooling system is operating.

Sensors and instruments such as meters measure water flow and power usage. When there is a chance to save energy due to changes in weather, temperature,

or load, BBP's patented software identifies the ideal "setpoints" or settings to be changed.

These instructions are sent to industrial controllers – which can be bought off the shelf and installed – that then adjust the setpoints of individual equipment.

Hoe said the technology can deliver annual energy savings of up to 40 per cent for its customers.

Based on their projects outside Singapore, that amounts to savings of about S\$100,000 to S\$300,000 per year for commercial buildings and up to S\$5 million per year for industrial buildings in the pharmaceutical, manufacturing and semiconductor industries.

Hoe said BBP's first principle is that it does not want business owners to invest in changing their equipment, but rather to use technology to make existing equipment run smarter and more efficiently.

"We do not want business owners to worry about energy savings, and we want them to focus on what they're good in," he said.

"For example, if they are running a semiconductor manufacturing facility, we want them to focus on the semiconductor process."

BBP's business model is such that it does not charge customers if they do not end up saving on energy costs.



Hoe Boon Chye (left), chief executive of Barghest Building Performance, believes the Vietnam segment of his business has the potential to grow 40% year on year, given the country's rapid industrialisation.

Rather, BBP takes about 80 per cent of the actual cost savings as its fee. The energy savings have to be certified by an independent third party, such as international testing and certification firm Tuv Sud.

Founded in 2012, BBP entered Vietnam about two years ago as part of its later-stage regional expansion, having already established itself in Indonesia, Malaysia, Thailand and the Philippines.

Its existing clients in Vietnam include Vincom, a unit of Vietnam's largest real estate conglomerate Vingroup, which owns several shopping malls in the country.

More than half of BBP's revenue comes from Singapore, while Vietnam currently accounts for about 5 per cent.

But given Vietnam's rapid industrialisation, Hoe believes the market has the potential to grow about 40 per cent year on year, especially given BBP's relatively small base.

This is because of the high level of interest that global investors – including Samsung and Intel – have in setting up manufacturing bases in the country, alongside an in-

crease in public infrastructure projects. To scale in Vietnam, the company is looking for sales channel partners that can help them to drive growth, said Hoe. It also hopes to work with local institutions to increase awareness among businesses, and to tap existing clients in other countries who have operations in Vietnam too.

Hoe noted some inflection points that are benefiting BBP's business, particularly the current high energy prices that translate into high electricity prices.

"Vietnam is not going to be able to shield themselves from this global energy crisis that's happening around us," he said.

"They are going to move quite fast and aggressively in terms of energy transition and pushing for renewables, which they have been doing for quite a while now."

These stories are part of a new BT regional series on South-east Asian markets. In the coming months, BT journalists will head to different countries in the region to bring you the latest from the ground.