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[BUSINESS - PEOPLE OPPORTUNITIES]

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BUSINESS
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CLEAN-TECH INDUSTRY

INVESTING IN GREEN,
SUSTAINABLE
TECHNOLOGIES

BUSINESS SUSTAINABILITY

MANAGING THE RISKS IN
BUSINESS CONTINUITY

SINGAPORE ECONOMY

BUSINESS OUTLOOK
REMAINS POSITIVE



OPTING FOR CLEANER TECHNOLOGIES

Many companies in Singapore are pumping resources into emerging newer and cleaner technologies, and this is helping their bottom line as well as the environment. BiZQ takes stock of this development.



SAMWOH CORPORATION'S ECO-BUILDING IS THE FIRST PROPERTY IN SOUTHEAST ASIA TO BOAST AN ENTIRE LEVEL BUILT WITH CONCRETE CONTAINING 100 PER CENT RECYCLED AGGREGATE (LOOSE GRANITE). THE BUILDING LOCATED IN THE INDUSTRIAL ESTATE OF KRANJI CRESCENT IS COVERED IN A STEEL MESH TO PROTECT IT FROM THE SUN AND DUST.

Home-grown Samwoh Corporation put a green spin on concrete when it constructed a building with a 100 per cent recyclable aggregate made by breaking, removing and crushing used concrete – the first company in the region to do so. “Recycling is the key to sustainable development. We constantly seek innovative and creative green business

encompassing the concepts of reduce, reuse and recycle,” said Mr Elvin Koh, Managing Director.

For this, the company was honoured recently at the Singapore Environmental Achievement Awards. It was also a winner in the Enterprise Green Technology/Service Enabler category at the Singapore Business Federation (SBF)'s Outstanding Sustainability Awards.

“Using recycled materials is not just about cost. More importantly, we use them to ensure sustainable development,” Mr Koh said.

Siloso Beach Resort, a family-owned hotel with more than 60 employees and 200 rooms including 12 villas, is another example and a standard-bearer for the hospitality industry. From the design right till the construction



AN AERIAL VIEW OF THE SILOSO BEACH RESORT IN SENTOSA.

stage, the property was built with the environment in mind.

Executive Director Mr Kelvin Ng said: "Preservation of the environment is at the heart of the resort. The built-up environment takes up only 30 per cent of the land, with the other 70 per cent preserved in its natural state. Even the 90m-long swimming pool was designed around the natural terrain, so its construction required minimal digging."

Also, the resort uses technology that improves its efficiency and reduces waste. For example, air-conditioning is run on a third-generation system that has energy-efficient chillers with heat exchangers that provide heat for hot showers. A garbage converter turns food waste into liquid waste for more efficient processing and treats water that can be discharged into the drains. These efforts have led to savings of up to 25 per cent in energy costs.

Samwoh and Siloso Beach Resort are among a growing list of firms using cleaner and greener technologies to make a difference to the environment as well as their business. Companies deploying such technologies are springing up in every sector in Singapore.



Singapore Environment Council's Executive Director Mr Howard Shaw said that driving sustainability within industry is a

Making turbine waves

Many may think Singapore is a newcomer to green technologies, but Atlantis Resources Corp, a Singapore-based clean technology firm, is making waves after recently unveiling the world's largest tidal turbine. This turbine is capable of delivering consistent electricity to 1,000 homes.

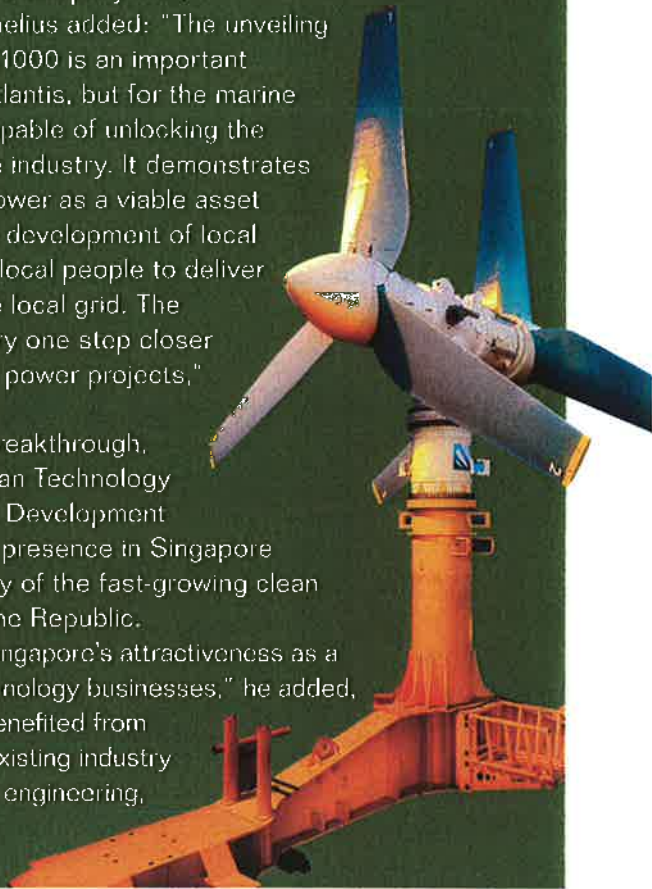
Working with the highly skilled Singapore workforce and collaborating with the likes of Nanyang Technological University enabled the company to create its AK1000 turbine, which was designed and tested in Singapore waters during key periods of its 10-year research history.

Specifically, it was tested in the southern waters of Singapore near Raffles Lighthouse in 2008 to collect key data. Dwindling fossil fuel resources and growing concern of its negative impact on global climate have resulted in a global race for clean energy in recent years. Tidal energy has the potential to be a key energy source for a world grappling with rapid urbanisation, the company said.

CEO Mr Timothy Cornelius added: "The unveiling and installation of the AK1000 is an important milestone, not only for Atlantis, but for the marine power industry as it is capable of unlocking the economic potential of the industry. It demonstrates the emergence of tidal power as a viable asset class that will require the development of local supply chains employing local people to deliver sustainable energy to the local grid. The AK1000 takes the industry one step closer to commercial-scale tidal power projects," he said.

Commenting on the breakthrough, Mr Goh Chee Kiong, Clean Technology Director of the Economic Development Board, said that Atlantis' presence in Singapore will "increase the vibrancy of the fast-growing clean technology industry" in the Republic.

"This project affirms Singapore's attractiveness as a global home for clean technology businesses," he added, highlighting that Atlantis benefited from Singapore's strengths in existing industry clusters such as precision engineering, offshore and marine.



key factor in reforming Singapore's economy so businesses remain competitive in the global arena. Environmental management has to be nurtured so it becomes an integral part of business, he added.

Consumers are going green
The fact that consumers themselves

are becoming increasingly "green" is another factor driving businesses to go this new route. "More consumers are making eco-conscious decisions. This is presenting manufacturers with the opportunity to use sustainability as a competitive advantage to grow market >



“ Using recycled materials is not just about cost. More importantly, we use them to ensure sustainable development. ”
 - Mr Elvin Koh, Managing Director, Samwoh Corporation



EXOVA SINGAPORE DEVELOPED NEW METHODS IN CALIBRATION, CERTIFICATION AND TESTING TO MEET MARKET DEMAND FOR MATERIALS TESTING SERVICES.

share,” said Singapore Manufacturers’ Federation’s (SMA) Mr Gwee Seng Kwong.

He added: “SMA is committed to assisting manufacturers to develop their green capabilities and fostering industry collaboration. We facilitated a pilot project to develop by-products by Winrigo, using homegrown brand Prima’s bran waste. We are looking to develop such success cases and provide the momentum to bring in more eco-conscious manufacturers.”

Winrigo is a biodegradable-plastics company that produces a composite material called 3Rplas, which is made of polypropylene and rice husk fibre. This composite is made from recycled plastics waste and reduces the dependence on plastics based on fossil fuels.

To address its weak performance properties, rice husk fibre is added to reinforce its strength. The final product is a re-engineered

eco-friendly plastic with superior properties over prime polymer which possesses the look and feel of wood.

Joining the bandwagon

Other organisations pushing similar initiatives include SBF. As part of a joint effort with Temasek Polytechnic and supported by the Economic Development Board and International Enterprise Singapore, the Clean Energy Testbedding Community project was set up.

Its principal objectives are to drive the adoption of fuel cell and other clean energy technologies as well as actively promote, engage and support SBF members in identifying, piloting and testing ideas and prototypes.

One beneficiary of this initiative was Real Time Engineering (RTE). The local firm worked with Temasek Polytechnic to develop unique fuel cells – electrochemical devices that combine hydrogen and oxygen to produce electricity, with water and heat as their by-products.

This effort is already changing the lives of the masses. The Clean Energy Testbedding Community has enabled RTE to provide fuel cell technology for lifts in HDB estates as well as develop it for other possible

applications, said Mr Philip Wong, RTE’s Director.

Materials testing

Companies also pointed out that the emergence of the clean technology industry will give rise to supporting services, with one area being the materials testing sub-sector.



Exova

Singapore Pte Ltd, a materials testing player, believes that materials testing is a vital part of ensuring that clean technology meets the desired standards.

General Manager Mr Larry Drake said that companies from the automotive, transportation and aerospace industries increasingly require innovative and higher levels of materials laboratory testing and assurance services. Such services will ensure that companies in the clean technology sector meet the stringent requirements for quality, safety and performance.

To meet rising demand, Exova will bring its ISO 17025 certification expertise to Singapore when it opens a new lab here in 2011. +

