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So long as there's solar ...

There's business to be made, reckons the founders of +Solar Systems, who aim to create the next energy revolution. 6 & 7

Born
to trade

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up a storm

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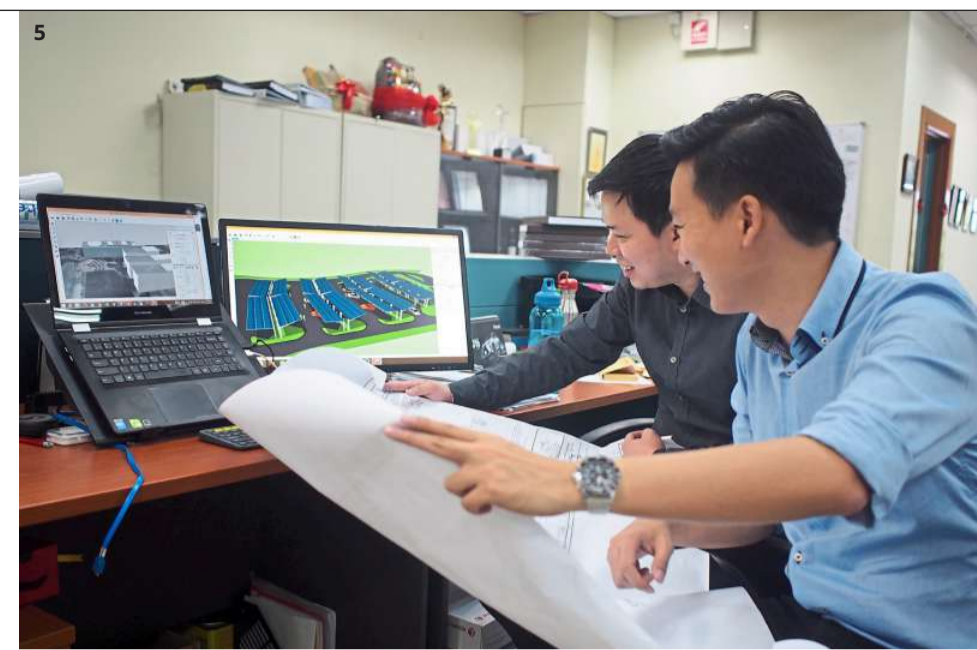
4 Staff checking the wiring involved in the transmission of power from the solar panels.

5 Planning is vital - the company does simulations to calculate the power that would be generated and the installation of the solar panels. (right) Plus Solar Systems Sdn Bhd's co-founder and executive director Ko with his co-founder and project director Oh.

6 Some of the solar panels that the company keeps stock in its office in Seri Kembangan.

7 Ko inspecting the mounting of solar panels on roof tiles.

8 The solar energy service provider requires more than just solar panels to get the job done. Shown here are some of the metal casings to keep the wiring secure.



1 One of the staff checking the solar panel installation.

2 One of the company's project sites in Cyberjaya.

3 (left) Plus Solar Systems Sdn Bhd's co-founder and executive director Ko Chuan Zhen with his co-founder and project director Ryan Oh Zhi Kang.



GOING into a business which entrepreneurs are passionate about makes for a more interesting journey, and co-founder Ko Chuan Zhen of Plus Solar Systems Sdn Bhd can certainly attest to this.

A firm believer in education paving the way for students to explore various topics on the world they live in, Ko, being a science stream student himself, believes that many students select the course because they are good in mathematics, or some science related subjects like physics.

However, Ko, 32, who is also the executive director of the solar energy service provider, humbly admits that he was quite lost after that until he built on his knowledge of the potential of solar energy.

"As part of my final year project research for my degree in electrical engineering, I wrote on how to exhaust the heat out from a car parked under the hot sun with an off-line solar powered ventilation system," he told *SMEBIZ*.

It would have been quite a sight to see him working on the project, in which he dismantled his father's Proton Iswara.

Duct tape was seen everywhere, keeping the wiring and sensors in place as he removed the rear speakers to be fitted with ventilator fans and attached solar panels on the car roof.

"My engineering degree's final year project kick-started my interest and passion in solar technology. And with my internship at the National Taiwan University of Technology (NTUST), it enlightened me on global trend in solar energy. I made a decision to develop my career in the future opportunity of clean technology industry when I turned 23," Ko said.

Upon graduating in 2008, he looked for employment with a Japanese multinational company as a solar engineer.

"I was fortunate to have the opportunity to work on building solar farms and solar power plants in various countries, from South Africa to Australia," Ko said.

After three years, he worked with a Germany company who wanted to expand its

Building on the future

A budding engineer switches his focus to clean technology and makes the leap towards becoming a successful solar energy service provider, reports **LIM WING HOOL**.



solar business in Malaysia and he started off a sales manager.

But his job scope went beyond sales as he soon became "employee No 1" and ended up doing what most entrepreneurs have to go through - setting up a company.

"I had to look into the renovation of the office right down to hiring the staff," Ko said. Looking back, Ko feels it was a good learning experience.

Not content with being just an employee as he felt he could use his expertise in the Malaysian market where solar energy was relatively new then, he toyed with the idea of forming a solar energy consultancy.

He formed Leaf Energy Sdn Bhd in 2011 with his schoolmate Ryan Oh Zhi Kang and

and Poh Tyng Huei, both 32, with just RM100,000 capital, pooled from all their savings.

The office was set up in Seri Kembangan with another founding member, Simon Wong, 30.

"As a consultant, we made sure our clients' interest was protected, and we also advised contractors on the engineering designs while monitoring every aspect of the installation," Ko explained.

After a track record of five clients in the first year, they went on to establish Plus Solar Systems Sdn Bhd (+SOLAR), a turnkey solar service provider, whereby they provided a one-stop service, from sourcing for the materials (mainly consisting of solar panels), providing engineering and financial solutions to commissioning, cancelling the need for clients to have multiple contractors in a project. Still operating from the same office in Seri Kembangan, today +Solar has a staff force that has grown from two to 25.

+Solar, which recently won the *The Star* Outstanding Business Awards 2015 (SOBA) Rising Star award, has to-date about 300 clients with projects ranging from construction of solar power plants to residential projects.

The total power generated for these clients is 27MWp (Mega Watt peak, a solar power measure in photo-voltaic industry), which is equivalent to 6,750 residential home solar systems in Malaysia, accounting for 10% of the total solar energy in the country.

The only difference from just being a con-

sultancy is that now, they have to watch their cash flow very carefully as they need money to procure materials and clients don't always pay on time.

One of the key challenges in the industry is the dependence on limited quota via the Feed in Tariffs (FIT) scheme in which solar power clients can sell the energy generated (measured in kWp or kilowatts peak) via the solar panels back to Tenaga Nasional, the national electricity provider.

However, Ko sees a silver lining in the upcoming Net Energy Metering (NEM) policy, which allows for more building owners to install their own solar system for self-consumption while saving on their electricity bill consumption.

He added that the company gets to enjoy tax savings from Malaysian Investment Development Authority's (MIDA) Green Investment Tax Allowance (GITA) scheme.

"As solar energy is relatively new, having such a scheme is a good encouragement as clients can recoup their investments within a shorter period."

The company handles various types of projects, ranging from RM35,000 for a residential project to RM9mil for a solar power plant.

With the FIT, NEM and MIDA's tax incentive, clients can recoup their investments in about seven years.

"There are also clients who didn't apply for the FIT quota, but installed solar systems anyway to meet the Green Building Index (GBI) requirement, or for self-consumption to save

on their monthly electricity bill and company tax," Ko said.

But, these are rare occasions so Ko is not overly concerned. Based on good service, reliability and customer satisfaction, he thinks people will eventually use solar power as the main power source among the various sources of renewable energy such as wind, biogas, biomass and others.

Optimistic about the future, Ko added that as the price of electricity rises, it will be eventually more cost effective for users to generate their own electricity with affordable solar power, bearing in mind especially how solar panel prices have dropped more than 85% since 2008.

The next leap would be to work with battery storage companies to provide clients with the capability to store the energy which can then be used at a later time.

"We want to create the next energy revolution and change the way people consume electricity, from traditional energy into clean energy," he said, adding that they would also be looking into being a solar farm operator in the future.

Fact file:
Initial startup capital: RM100,000
Projects: From RM35,000 for a residential project to RM9mil for a solar power plant
Number of staff: 25

