

Left: Employees are able to rent a space in the Benoni factory, where they have access to the tools and materials used to build SWH systems. They are then able to sell compiled systems back to Powerz-On.

Far left: South African manufacturers of local SWH systems create robust, versatile solar energy solutions.



IS THERE A MARKET for locally manufactured solar energy products?

South Africa’s abundant sunshine, mild climate, and technological know how makes it ideal for solar energy technology applications. The renewable energy market is booming as people from all over the world become aware of rising electricity prices and the need for alternative solutions.

At the Solar Water Heating (SWH) conference on 5 November 2009, Energy Minister Diphuo Peters told delegates that the *Renewables 2007* global status report showed that over US\$100-billion was invested in renewable energy capacity, manufacturing plants and research development. It’s interesting to know that the largest share of annual investment in renewable energy came from Germany, China, the United States, Spain, Japan and India. “Despite the fact that Africa has abundant renewable energy sources, we don’t see it featuring anywhere in the list and this needs to be corrected,” said Peters.

Taking back the power

Powerz-On Solar Systems, a division of the CSI group, has become one of the leading local producers of solar energy products, supplying products not only to South Africa, but also neighbouring countries such as Zimbabwe, Botswana and Zambia. Their in-house manufactured Flat Plate Water Heater is a competitive alternative for South Africans who want to supply locally manufactured SWH systems, reduce the country’s dependence on fossil fuels and contribute to a sustainable local industry.

Director Theuns van Aardt at the Powerz-On production centre in Benoni, says that the commercial and residential markets are increasingly turning to the local solar energy industry for supplies. “I’m amazed at the positive reaction we’ve been getting,” says Van Aardt. “Locally manufactured products are gaining popularity. Not only because of their ability to create jobs for South Africans and boost the local economy, but also because the buyers are looking for quality products from trusted local suppliers.”

Van Aardt believes that the commercial and residential markes have been waiting for an alternative to imported SWH systems. “If the product is bought locally, it is easy to get fixed, exchanged or modified – that is something that cheaper imports can not offer,” explains Van Aardt. “Delivery from overseas can take months and when you order a container of SWH products, it often happens that you don’t have a guarantee and you have to make do with what you get.”

Remember the hunt for generators?

Van Aardt refers to the 2008 black outs, where households and businesses were forced to buy generators in order to supply electricity, when explaining the problem with cheap imports. “When everybody rushed out to buy generators, there were month long waiting lists followed by a supply of cheaper, low quality imports,” says Van Aardt. “When the product defaulted or needed servicing, the suppliers had disappeared because they were opportunistic fly-by-night companies. I think that the amount of SWH systems that are imported to South Africa are going to give the industry a bad name. One must, however, understand that there are many who have a brilliant back-up system. The South African continues to be street-wise”.

How green are solar imports?

A Market Survey of Solar Water Heating in South Africa for the Energy Development Corporation (EDC) of the Central Energy Fund (CEF), which is available at www.cef.org.za, recommended that SWHs be subsidised by a cash amount which is equal to the value of the avoided environmental costs, including greenhouse gases, over the life of the solar water heater.

“A solar water heating system will definitely reduce the carbon footprint of a house in terms of energy use, but importing that system doesn’t do anything for the environment. The greenhouse gases released into the atmosphere in order to ship these products to South Africa means that local SWH suppliers of imported products may be supplying a green product to the market, but they aren’t acting in an environmentally friendly way,” says Van Aardt.

Empowering our people

The Powerz-On manufacturing unit in Benoni currently employs 50 people

who are not only learning new skills, but also getting the opportunity to invest in this sustainable industry. “We want to give our employees access to their own small business,” says Van Aardt. “In the factory, employees can rent their own space where they have access to the materials and tools we use to make solar water heating systems. They can then sell the system back to us so that they make a profit.”

A solution for Africans, by Africans

Despite many high quality SWH systems that are imported to South Africa, Van Aardt feels that the industry has been waiting for something that meets the distinct needs of South Africans.

“There aren’t only cheap, low quality products being imported. There are also extremely good SWH systems from overseas manufacturers. The problem I have with these is that they are very often too big, difficult to install and so obviously unfit for the majority of people that need SWH systems,” says Van Aardt.

According to Van Aardt, the lack of products that fitted the needs of South Africans is what lead Powerz-On to the creation of one of there most popular SWH units, called the Chigubhu. “This is a robust, African solution that puts solar water heating into the hands of the poorest of the poor and we at Powerz-On believe that it’s the future of solar water heating systems for the masses in Africa,” says Van Aardt.

The Chigubhu consists of a 25 litre can, a flat panel and a stand and its popularity has risen due to its simplicity and portability. “Eventually this product will cost under R1 000. Although people in rural developments might not be able to afford it, the UN, for example, can,” says Van Aardt. “The Chigubhu is also favored by 4 x 4 enthusiasts. It folds up neatly and it’s exactly what you need when going on a 4 x 4 holiday in Africa.”

Besides being able to supply customised products to the South African market, Powerz-On also supplies complete systems. “There is a huge need for complete SWH systems in South Africa. Our package includes everything you need – a panel, geyser and all the fittings,” says Van Aardt.

Price differences: But imports are cheaper

In a memorandum to all Eskom Demand Side Management (DSM) participants on 11 January, Eskom announced a drastic change to its Solar Water Heating Programme. Due to increased pressure on the government to ensure that SWH plays a significant role in reducing electricity constrains, the rebate on these systems has increased to allow a five year payback period.

“The popular Powerz-On solar water heating system that is usually purchased for South African households had a recommended retail price of ZAR14 000. With the new rebate adjustment, ZAR5 100 has been taken off the price, so it is just under ZAR10 000 now. To most people, that sounds like a good price,” says Van Aardt.



Above: This SWH system has become popular for its simplicity and portability, making it the ultimate African solution.

“Even though SWH systems are currently slightly more expensive to manufacture locally, this will drop as more people start investing in the local industry,” says Van Aardt before explaining that the Powerz-On product is only marginally more expensive that imported goods. “It’s a very competitive alternative to imported products and in many cases, it’s proved to be more efficient and of a higher quality. I want to tell the industry – let’s go local! The more we grow, the more the prices will drop.”

The CEF market survey also states that long term investments, such as government policies, expected price reductions and stable incentives for the SWH market are a precondition for driving down the price/experience curve. A price reduction of 20% was envisaged as being reasonable for the next 20 years (this statement is qualified by a cautionary note that price reductions don’t follow automatically with increasing numbers, if incentives are perceived to be short-term or fraught with risk).

Is there a market for South African suppliers?

“Government aims to have one million SWH systems installed within the next five years. This goal equals 16 000 per month,” explains Van Aardt. “Less than half of this demand can currently be met by local SWH suppliers. People that are looking to get into the industry should know that there is definitely room for South Africans to supply and distribute locally. People that want to get into the industry might be worried about the competition across the road, but it’s an open market at this stage and there is so much scope for people to supply locally,” says Van Aardt.

The local SWH industry is growing – there is an opportunity for South Africans to get in on this market and continue to grow with it. The entire world is turning to renewable energy and this is only the beginning of a completely new way of living,” concludes Van Aardt.

Source: www.cef.org.za/solar_market_survey.pdf

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Powerz-On Solar Systems
Tel: +27 11 9650127
E-mail: info@powerz-on.co.za
Website: www.powerz-on.co.za