



Guy Sella is founder, chairman and CEO of the Israeli Solaredge Technologies Inc. Solaredge's Powerbox (see page 88) was one of the new products that were presented at the Intersolar in Munich. SUN & WIND ENERGY talked to Guy Sella about the company history and the aims of the Israeli start-up.

**S&WE:** *Solaredge is a new brand name in the photovoltaic scene. Can you tell us something about the company history?*

**Guy Sella:** We started the company in August 2006 – me and four younger guys that used to work for me in the army as soldiers. So we were used to work together and when they wanted to leave

the army it was obvious that we will look to do something together. So we started in August 2006. We raised US\$ 10.75 Mio. in September 2007. Six months later we already had a full system working on the headquarter of our building in Herzliya. That was in March 2008. And then I said „Well, it is already working and it is already working very good. Let's go to the Intersolar and show our system.“ Our US product launch will be at the end of October at Solar Power 2009. Currently we are 70 people.

**S&WE:** *So in Europe you introduced Solaredge at the Intersolar in Munich.*

*Was the exhibition successful for you?*

**Guy Sella:** Very successful!

We actually had something in the range of 14 signed agreements before the Intersolar. When we started to look for partners, we contacted the big-

gest panel manufacturers and the biggest system integrators. But we are a small company, we can not approach all of them. During the Intersolar additional 20 companies approached us. Many people that we didn't had the opportunity to contact them, contacted us.

**S&WE:** *And did you know that National Semiconductor will launch a similar product to yours?*

**Guy Sella:** Yes, yes. We knew about them since June last year.

**S&WE:** *On your Homepage is written about up to 25 % more power of the pv-plant using Solaredge. Wherefrom do you have these datas?*

**Guy Sella:** We have several plants where we have installed the Solaredge system additional and we can compare the power harvesting before and afterwards. For example we have an installation in Japan, where we produce 35 % more energy since Solaredge is installed. But this is an very suboptimal installation with too much mismatches – good initial conditions for our system. If we go to a very good installation like in solar parks, in all installations but one we are getting 2 to 5 % more power. At a perfect installations in Spain for example we installed our So-

## „Ten years from now every panel will have active electronics in it“

laredge only on some modules. And up to the Intersolar we gained 4 % more benefit. That's based on the fact that we solved the mismatch – no partial shading in solar parks. But we do a MPPT which is not dynamic enough in other inverters. In two installations in Spain and the US, which are more a residential or a little bit like a farmhouse rooftop, in one we have 10 % more power, in one we have 17 %. So it would be much more simple to take a bad done rooftop installation with chimneys and so on and show you that we have 30 % more benefit. But this is not interesting for us.

**S&WE:** *You promote that theoretically your Systems works with third party inverters, but some features will not be available then. What's the problem?*

**Guy Sella:** It is a business problem. In practice we have systems working with inverters from Xantrex, from SMA, from Sunways and with two Japanese inverters. So far every inverter we found on the market we know how to operate with. Like we work with a fixed voltage, many other inverters can switch to a fixed voltage as well. But as long as you don't have the receiver of our communication system you can not receive our monitoring and you can not get our safety features. In practice we have a unit that we can

To establish ties Guy Sella currently is out on business a lot. We met him at the Airport Cologne Bonn.

Photo: Katharina Garus

sell you that allows you to get the full features of the system with other inverters. But by selling this, we can not keep the total costs of the system the same. So we are trying to come with a better offering: We give you all these benefits more or less by the costs of living inverters. I'm saying „more or less“, because in some cases we are 5 to 10 % more expensive, in some cases we are even cheaper.

**S&WE:** *But how do you figure a market penetration, regarding that the inverters with integrated MPPT are established in the pv-branch?*

**Guy Sella:** The market in 2008 was 2.4 Billion Dollars. We are a small start-up company. So we need to gain a little percentage every year. There are obviously two approaches to take: One is what we decided to take. We said let's offer our customers a system whose total costs are very much similar to the established brands but you can get more power, monitoring for free, easier installation etc. This way we have to compete with the established inverter companies. We also could have taken the other approach and decided, well let's not compete with those and sell our system as a additional system. But by that we will actually not gain the grid parity as fast as with our approach. So we decided that it is better for Solaredge and better for the market if we compete head-to-head with the established inverter companies. I'm not expecting 30 % of the market in five years. Our goal is much more conservative. It is to reach in three years 3 to 5 % of the world market.

**S&WE:** *And what do you expect for the future, let's say in about 20 years. Will systems like yours and traditional systems exist in parallel or will one system be the dominating one?*

**Guy Sella:** I think that in five to ten years a very big portion of the installed systems will have distributed DC architecture – like what we do. I don't think it will be 100 %, I think it will be about 30 to 60 %. In many cases you can get good enough results from centralised inverters. But I do believe that ten years from now every panel will have active electronics in it. Either it will be our approach for power harvesting or it will be only for monitoring or for safety only. We already have a version for monitoring only. And we have under construction a version for safety only. And I think that we have very good opportunities to be the leading supplier of active electronics for panels in ten years.

**S&WE:** *What will be your main R&D-Projects?*

**Guy Sella:** I still believe that most of it will be on the power site, on the power harvesting, how to combine old systems. We started to work on the second generation of our ASICs. We have in development a 18 or 20 kW inverter, still in the same enclosure as our 10-kW-inverter. Or adding more cooling factors to the system. And we have under construction a 120 kW apparatus that should be due to the market next year.

*The interview was conducted by Katharina Garus.*



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43 B, Okhla Industrial Estate  
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Ph: +91 11 41 63 52 -01  
www.moserbaerpv.in

German Office:  
Kieler Str. 211  
24768 Rendsburg  
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