London BIPV conference springs a surprise

The Solar in Building Design and Construction conference at the Royal Institute of British Architects brought together numerous renowned specialists in solar architecture – but it will be remembered as well for the launch of the British Photovoltaic Association (BPVA).

The introduction of the UK’s feed-in tariff (FIT) in April 2010 has already attracted many new players to the rapidly growing UK solar market, though the emphasis to date has been on the use of the FIT by homeowners and businesses. The Solar in Building Design and Construction conference, which followed the first event held in Dubai in March 2009, focused firmly on the potential of PV for architects and builders.

The one-day conference was held on 24 September in London. It was attended by more than 200 representatives from a broad spectrum of companies, financial institutions, associations and press from the PV sector and addressed all aspects of solar energy in construction, including innovative roofing solutions, solar façades, design tools, installer franchise opportunities, financial solutions and other new products and services. Adoption of building integrated PV technology (BIPV) in the UK is set to accelerate rapidly with the introduction of the FIT. The new FIT helps secure investment in PV for the next 25 years, and to date the main discussion has been the benefits to households and companies. This conference, however, focused on the use of solar PV by architects and builders.

Speakers at the conference included Simone Giostra of Simone Giostra & Partners Architects in New York, Ray Noble, PV specialist at the Renewable Energy Association (REA), and Robert Schrimpf, a partner at Novus Modus, the investment adviser to ESB Novus Modus, a €200,000 investment fund established by ESB, a leading Irish utility group.

Other speakers came from System Photonics Spa, Suntech Power Europe, 3S Photovoltaics and SMA Solar Technology AG. Steve Pester, a principal consultant at BRE Global, also spoke, along with several building and design specialists. Daniela Schreiber, Director of EuPD Research, contributed recent
research on opinions in the UK’s PV market, based on a survey of UK solar installers.

It’s all in the façade

Simone Giostra, the NY architect, stunned the audience with his “curtain walls” of solar PV, notably his Green Pix media wall in Beijing, installed for the 2008 Olympics and described as “a sustainable media wall featuring the largest LED display to date and the first PV system integrated into a glass curtain wall in China”. CNN called it “the new Great Wall of China”.

“I’m introducing the science fiction section of the conference,” Giostra joked, though he acknowledged that curtain wall technology started in the 1990s. Early demonstrations of BIPV “curtain walls” include BP Solar’s Solar Showcase, originally built for the G8 meeting in Birmingham in 1998, complete with grid connection, but then moved to South Wales to become the visitor centre for Baglan Bay Energy Park.

So why have we not seen more BIPV? Giostra’s answer: “We now have the tools to measure wind, sun and humidity and translate it into an architectural system.”

Giostra has also designed and patented an application called SolPix that integrates solar PV and LED lighting. It can be seen in a site-specific installation at New York’s Cooper Hewitt Museum until 9 January 2011. The installation is the centerpiece of “Why Design Now?”, a design triennial. Said to represent the convergence of technology, design and the environment, the installation features a large-scale colour LED display and PV panels integrated into a sun-shading system. According to Giostra, SolPix transforms the existing glass structure into an energy-positive skin, harvesting solar energy and using it to power the screen, while protecting the site from excessive solar radiation.

In his talk, Ray Noble of the REA, described by the chairman as “the father of the PV market” in the UK, said that, to date, integrated PV has been seen as low volume but this is set to change: “With my background in building design at Arup, I’ve seen the future of PV as a building material. To date BIPV has been seen as being a specialist low volume market, but the future will be completely different.” He added: “The global market for building cladding is enormous. Therefore, if PV were made as a building material, the scale would drive down cost rapidly. To date PV manufacturers have only concentrated on making standard modules, as demand exceeded supply, but most of these manufacturers realise that the future market will be PV as building material.”

Alan Shingler, Head of Sustainability at architects Sheppard Robson and also at Royal Institute of British Architects Sustainable Futures Group, said: “BIPV on walls may not be the most efficient solution compared to rooftop PV, but it is interesting both for architects and clients. And there are some good opportunities for integrating PV into a wall.” Shingler said the lifespan of PV is a concern to architects. How long will it last, he asked. Sixty years? “I would use thin-film PV over crystalline though thin-film has a shorter life. It’s easier to replace.”

However, Noble said that thin-film has the downside of being available only in fixed sizes, which puts architects off – and can crack if annealed glass is used. He sees crystalline PV with laminated cells having a good lifespan and more flexibility in size.

Efficiency is still an issue. According to Noble, “roof integrated PV will generate more electricity than a façade integrated PV. In the UK a flat roof atrium will generate 90 % of optimum and a south facing façade will generate 70 % of optimum.”

On costs, Simon De Sitter of Suntech Power Europe, said that his company hopes to achieve grid parity by 2013 – and will soon open a UK office. “Grid parity will result from economies of scale plus high efficiency,” he said, calling for “continuous innovation”. As his company has 370 staff on its R&D team, innovation is clearly a priority.

Ray Noble summed up the conference: “As energy becomes more expensive, with traditional fuels becoming scarce, building design, energy efficiency and BIPV will play a major part in future building design.”

So while UK’s FIT helps secure investment in PV for the next 25 years, this is viewed as only the start. The newly founded BPVA (see interview on pages 122/123) aims to stimulate the establishment of basic infrastructure and ensure that there are no encumbrances to PV installations. Elizabeth Block
The British Photovoltaic Association was launched on 24 October 2010 by its chairman Reza Shaybani and CEO James Steynor. Their views were expressed in an interview with S&WE.

S&WE: The Renewable Energy Association had a solar PV association and currently has a Solar Power Group – and many member companies involved in PV. Why did you start up a separate association?

Reza Shaybani: The UK had PV-UK which was taken over by REA. Existing UK associations tend to focus on a range of renewables. But in most developing markets PV is treated as a unique segment with its own association. So we see the REA’s role as more of an umbrella association while we are totally focused on PV. Of course, we do not have a conflict of interest with other technologies.

James Steynor: Indeed, we see a very specific need to have a focused drive on PV in the UK. Existing UK based associations have done a great job but with the stimulus of the FIT introduced in April 2010, we need a far more dedicated hands-on role to maximise the market potential for sales but also to create jobs in research and engineering.

S&WE: Does the BPVA plan to join the REA?

Steynor: We hope to work closely with the REA. They promote renewable energy with a particular focus on lobbying government and they have certainly contributed to the introduction of FITs here. We are in discussions with the REA and hope to have some exciting announcements shortly.

S&WE: Your CEO, James Steynor, has never worked in the solar sector, or indeed, in renewable energy. Why was he chosen?

Shaybani: The BPVA’s key mission is to create the backdrop necessary for the UK’s PV sector to expand rapidly.

S&WE: Do you have a vision for the BPVA?

Steynor: Our main goal: to help grow the UK’s PV market via grass root level education and increased awareness of the advantages of PV. As such growth will require a rapid expansion of infrastructure to support more installations, we will be there to support that as well. We expect our membership levels to exceed 500 by the end of 2011.

S&WE: How do you plan to relate to the European Photovoltaic Industry Association?

Steynor: EPIA is very supportive of our association and we are already reciprocal members, working with them on many other areas including joint events. We are also in contact with some 20 other national associations and will announce our strategy and alliance details in the coming weeks.

S&WE: What about the REA’s conference on 18/19 October? The REA website says: “Solar Power UK 2010 is the first official event of the REA Solar Power Group, the voice of the Solar Power industry in the UK.” Will the BPVA participate in this conference?

Steynor: BPVA will be represented at this conference along with many of our members. We see the REA’s role as continuing to stand up for PV as one of many renewable sectors. We focus 100% on PV and do not see any conflict here. In any case we understand this event is in association with the REA, not specifically organised by them.

S&WE: Your CEO, James Steynor, has never worked in the solar sector, or indeed, in renewable energy. Why was he chosen?

Shaybani: The BPVA’s key mission is to create the backdrop necessary for the UK’s PV sector to expand rapidly. So we needed a dedicated business professional, not another bureaucrat running another bureaucratic association. James has close contact with a number of PV companies and CEOs and has run start-up technology companies. We wanted a chief executive with experience in running a business. Another advantage: a chief executive who is seen as fully independent with no past that could possibly conflict with members’ interests. I have known James for 16 years and have confidence in his ability.
S&WE: How will you build your association and expand your membership? Will you lobby the British government?

Steynor: We already have just over 40 members and expect this to rise soon to 100 plus. We aim to increase membership by offering value to our members, for example, BPVA member space at trade events and conferences, dedicated BPVA events, mapping services for UK sites, and a dedicated London member showroom. We also plan to launch a solar consumer magazine later this year. Although we expect to maintain good relations with the government and look for support, especially in education and job creation, we do not plan to lobby the government directly. We will leave that to the REA.

S&WE: How do you view Britain’s recently introduced feed-in tariff?

Steynor: This was absolutely necessary to drive widespread PV adoption in the UK as in Germany, Spain and other markets. We must not waste this opportunity for growth. So we need to maximise the benefits of the FIT to grow long term viable technologies in the UK and work towards the long term goal of grid parity.

S&WE: According to The Guardian of 1 October there is speculation that the British government may cut the FIT. What do you think?

Steynor: Although it is clearly probable that the FIT will reduce at the 2012 review, the existing FIT level looks set to remain in place until then. While the value of the UK’s FIT may appear high, one also has to take into account the cost of PV in the UK versus other developed markets such as Germany. A possible reduction after 2012 should allow the UK market to get established and the costs of PV to come down through an increase in volumes.

S&WE: While some believe that the different renewable energy sectors should work more together to meet our overall targets, in his speech at the launch, your CEO, Mr Steynor, spoke of “competing technologies” such as wind power and solar water heating. Given that solar energy is now being used to power LED, why speak of “competing technologies”?

Steynor: We see it like this: if an association receives money to represent a number of renewable technologies, member funds are inevitably distributed. If your interest is in wind farms, you really don’t want your membership dues going to solar thermal or PV for that matter. As there is sometimes no clear choice between different forms of renewable energy, we want to assure our members that in all cases their association is working for them and their interests alone. I did not mean to say that as an energy source PV is better than any other. It is simply that we will focus our efforts on PV as a significant contributor to the UK’s renewable landscape. We believe PV in the UK is more tangible and more accepted by the public. While no one wants a wind farm nearby, everyone wants stylish solar tiles on their home.

The interview was conducted by Elizabeth Block