

Beyond boom and bust: European solar grows up

Post-subsidy solar | Europe's solar market has been characterised by peaks and troughs and a good deal of pain for its industry in the process. Although the continent is not expected to see a return to anything like the explosive growth it saw up until 2012, steady forecasts for the coming years hint at solid, sustained expansion. John Parnell reports



Source: REC Solar.

Boom and bust is exhausting. The lows force good people out of the industry and do irreparable damage to its reputation. In some ways, the highs aren't much better. Good companies overstretch and set themselves up for a fall in the inevitable lean times. The opportunistic flock for a quick win but will disappear before you can say single-digit-returns.

There is a temptation to compare recent European PV deployment figures with the boom years and feel a sense of disappointment. Yes the industry is deploying far less solar and the forecast for the next few years are hovering between 8-10GW

compared to a massive 17GW in 2012. But ask those working in the solar industry in Spain or Greece or even Italy if they would like to be installing half what they installed in 2012 this year, and they'd bite your hand off.

"In 2014 we have seen probably about 7GW of PV connected to the grid compared to 11GW the year before and 17GW in 2012," says James Watson, chief executive of the European Photovoltaic Industry Association (EPIA). "The rate of installation is decreasing but nevertheless the European market remains the largest market in the world in the sense that there

Nowhere encapsulates Europe's boom and bust solar market better than Spain, where PV has gone from hero to zero.

are 180GW installed globally and more than 90GW is in Europe."

To coincide with the beginning of Inter-solar Europe 2015, EPIA launched the 2015 edition of its Global PV Outlook report. It tells a tale of far less dramatic deployment in Europe but a much more predictable future.

"I think that we are probably going to see a small increase in the coming years and stabilise around the 10GW mark going through to about 2020," says Watson, "and then probably we'll see an increase as older power stations are decommissioned and replaced with renewables, in our case hopefully solar to a high degree."

Small and steady

Historical deployment is not likely to offer much cheer to those trying to make a living now but it does highlight that Europe is the grand dame of solar and the expertise built up in the process of putting those 90GW into European soil and onto roofs.

"European companies, wherever they are based, should have the right knowhow and the technical abilities to go out into new markets and use that expertise to their advantage," says Watson. "I was in Spain recently talking to some of the companies there. Having gone through what happened in Spain and survived, that's the kind of knowhow and ability they should be able to export to places like Latin America where they have the cultural similarities through language and other cultural aspects.

"Maybe the set-up [in those new markets] isn't as cosy as we have seen in Germany five years ago but the experience they have should be able to drive them forward. If you can survive retroactive measures in Spain I think you have a lot of resilience and character as an organisation and therefore there is much you can do in new markets emerging in Latin America, Africa and beyond."

Developers from Italy, Germany, France and even the latest solar graduate, the UK, are looking at markets overseas. Technology suppliers have had mixed fortunes in the face of intense competition from Asia.

Many European companies are doing very well overseas, many have had to, but finding success closer to home would

Trade woes extended

At one point, any forecast or commentary on the European market seemed to have the attached caveat "the outcome of the trade case". This was soon replaced with the "potential size of tariffs" and ultimately "the uncertainty of the price undertaking".

And it seems that even now the unresolved dispute between the EU and China over the latter's apparent dumping and subsidy of PV equipment imports still looms large over any discussions of the future of European solar.

The two-year tariff applied in 2013 expires at the end of the year and fresh uncertainty has mounted over what will follow. At the end of April EU ProSun, the main agitator in the case, confirmed to PV Tech that it would request a review of the process. The European Commission then announced it would investigate the way the minimum price is set in the undertaking between it and the Chinese.

The bottom line is a mandatory investigation period that extends the tariffs, and presumably the price agreement, beyond the December 2015 expiry – potentially well in to 2016. The complaint alleges that Chinese manufacturers submitted price data *en masse* to the Bloomberg benchmarking index that the minimum import price is defined by. This had the effect of lowering the resultant value of the index and dropping the price floor for Chinese firms in Europe. The Commission is considering using the Bloomberg index minus all the data from Chinese solar firms.

This would drive up the lowest price that Chinese firms can offer in Europe, posing a fresh set of challenges for European industry to contend with.

always be preferable and for many firms this is an important bedrock on which to build international success.

So where will deployment come from in post-boom Europe?

"If we're looking at 2015 as a whole the UK is number one but most of that has been done already in Q1," says Ash Sharma, senior research director at market research firm IHS. "We have the UK at just under 3GW for 2015, out of 8.4GW for the whole of Europe; that's a massive chunk. Germany we have as flat [compared to last year's 1.9GW].

The EU's 2030 climate targets will have a key bearing on the fate of solar in the continent.

"France is a growth area; it will be over 1GW for the first time since 2011, which is pretty impressive. Other markets have some smaller increases, including the Netherlands where we expect around 500MW to be installed this year and Switzerland with fairly modest growth to around 300MW. There are some other smaller pockets of growth. One is Poland; we see Poland installing about 100MW this year. They are the main ones. The rest are fairly small – only nine markets in Europe will go over 100MW in 2015."

This pattern of many small but steady markets looks to be here to stay and Sharma doesn't see any European countries offering explosive growth any time soon.

"It doesn't look like there is going to be any new ridiculous policy that triggers a booming market, I think that is unlikely now in Europe. It seems to be much more sensible, so moderate and sustained growth seems more likely." Given the current state of markets in places like Spain and Greece, this is surely no bad thing.

Beyond boom and bust

EPIA's forecast for Europe, while far from rosy, shows evidence of a market that has turned its back on unsustainable policy support in place of more measured approaches to aiding the sector on the path to sustainability.

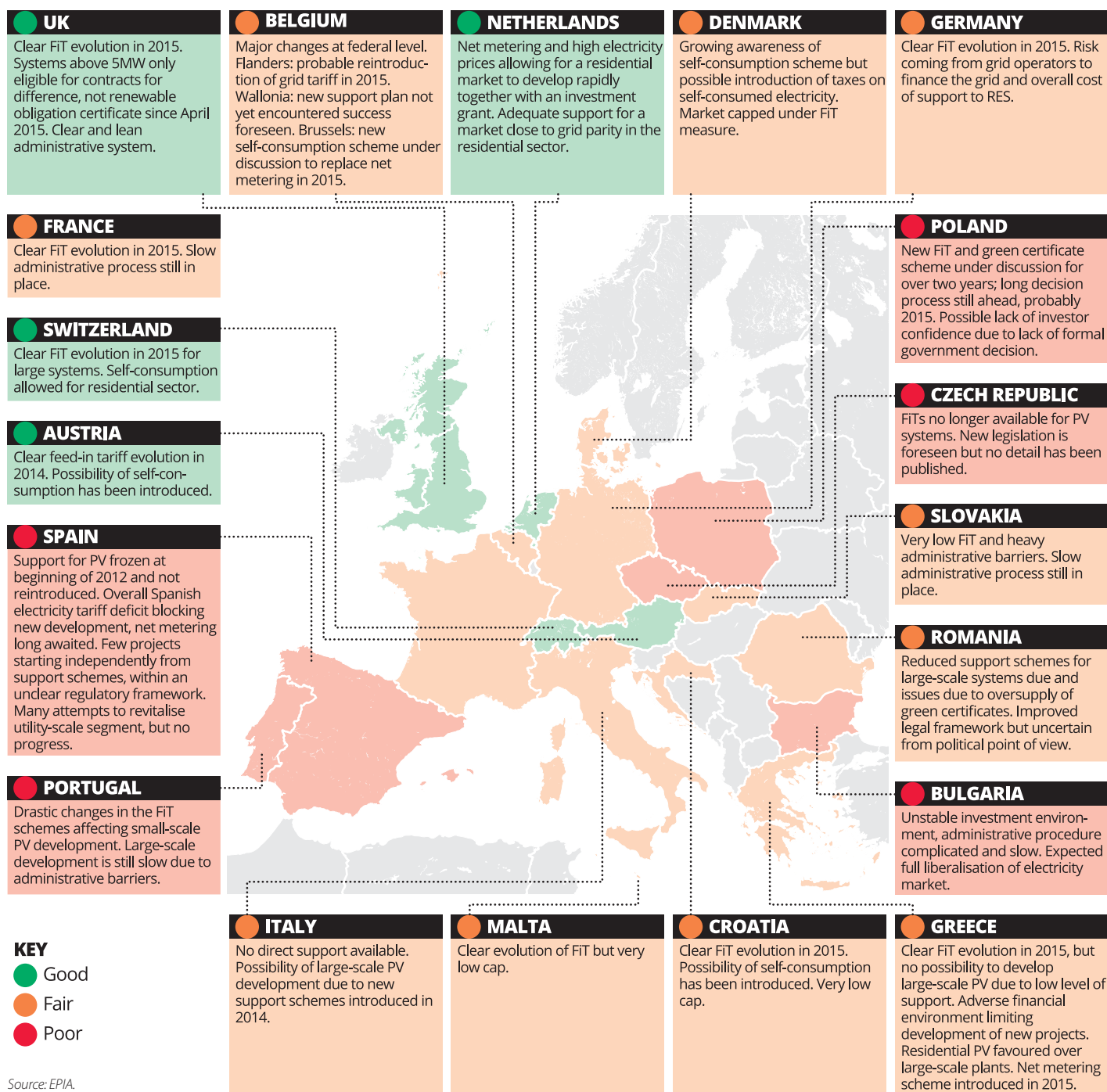
According to the EPIA, even Germany – Europe's solar Icarus, which has fallen by far the furthest – still has a very strong role to



Source: European Union.



Source: Flickr/hans.poldoja



Solar's prospects in some of Europe's key markets, old and new, as set out in EPIA's 2015 Global Market Outlook for Photovoltaics.

play in the new European solar market.

"We expect to see Germany again kicking off," says Watson. "Support schemes are being reduced and moving into a new world of auctioning, which has an impact on the large-scale sector but my estimation is that household level solar will be a main driving factor. In Germany, where most people have a natural environmental bent, we will see a continued important presence in the overall installations that we get in Europe moving into that new stage of stability."

Watson stresses that the age of overly generous feed-in tariffs was not for

nothing. Strong support and rapid deployment triggered the wave of falling costs and increasing deployment that is still spreading today.

"We would like to see more stability in the market in general but the great thing that has been achieved so far is that government support has created a boost which has driven the market and helped more people get involved. That's brought down costs as people have been able to create larger economies of scale for systems," says Watson.

Now, however, there is a general preference towards such generous support

being withdrawn. Phasing out support at a rate linked either to falling costs or increasing deployment is a more progressive way of helping the sector toward sustainability. The real wrecking ball for solar is the use of retroactive changes that tarnish the sector's reputations and scare off would-be investors.

Another challenge for the industry to contend with is the shift to competitive tendering. Auction-based schemes, as championed by the European Commission, are replacing feed-in tariffs as the de facto support mechanism for solar. While these could ultimately help the industry

move towards a more sustainable footing, they are not without their limitations (see second box).

Solar and utilities

The other avenue for a changing solar landscape is the current plight of utilities. From 2020 onward, many of Europe's largest grids will be on an investment drive. This will take place at a time (hopefully) when the new UN global climate change treaty comes into force and the EU will (hopefully) be pushing to meet its own 2030 renewable energy targets. E.ON became the first utility to blink and announce that it will no longer invest in new conventional power generation. More will follow.

"I think the forward-looking and more progressive utilities are looking into their crystal balls and seeing that it's going to be a future with a lot of renewables in the grid," says Watson. "That changes tremendously the way that they'll be able to deal with their customers. It's going to be moving away from, as it has been for generations, a case of sitting by the door waiting for the bill to arrive and just paying that every month. In fact people are going to be more interested in managing their energy through apps on their phones. People are going to be more engaged.

"Our estimations are that things like nuclear and coal are reducing quite considerably in investment, more is being decommissioned than is being put into the market place. So if you're really going to be investing in that... that's Russian roulette. You've got more certainty going for renewables than grid [centralised generation] investments," says Watson.

All this of course plays into the hands of solar. Yet the scenario outlined by Watson is far from likely to be consistent, and solar will still face a fight to gain traction in some parts of Europe. This is well illustrated by the case of Poland, one of the emerging solar markets identified by both EPIA and IHS' Sharma, but one where solar faces huge obstacles from inertia in the incumbent energy sector.

Poland has tried more than once to get its PV sector off the ground but even the modest inroads it has made have been challenged by the country's coal industry. Stanislaw Pietruszko, head of the Photovoltaic Association of Poland, sees little scope for a major switch in the country's energy mix, which is dominated by coal.

"The present status quo will last. The coal lobby employs so many people that no lawmaker will act, the coalwork-

ers would simply come to Warsaw and protest. Coal is so strong and has millions to use in support of the sector," he claims. "Poland has a high potential [for PV] but the problem is the big energy companies. I don't understand why they block PV when it would be less than 1% of the energy that they produce."

Plans for a new feed-in tariff are given a lukewarm reception by Pietruszko who says the proposed rate is too low, particularly given that income tax is levied on revenue from the FIT. With the lowest income tax rate set at 18%, this all but kills any demand. Replacing the income tax rate with a levy on self-consumed power is one change Pietruszko proposes.

Ultimately, he says, the potential for solar in Poland is threatened most by the lack of understanding among the public, the government and the energy companies, of the benefits solar can return to the country.

Beyond 2020

The problems Pietruszko describes are by no means restricted to Europe. The Paris climate talks at the end of this year will determine the shape of the climate treaty that comes into force in 2020. The EU will likely dangle the ambition of its own 2030 climate and energy package at the talks. The ambition, or lack thereof depending on your viewpoint, in that suite of policies could also evolve in Paris. The opportunity to set strong signals for renewables must not be missed, says Alex Fornal, head of project development in the UK for juwi.

"Getting political is going to be an increasingly important priority for the UK solar sector and Europeans countries generally. EPIA and other trade associations are going to need to work closely together on a collective lobbying effort at the European level to strengthen the case for strong commitments in Paris," he explains.

One of the objectives for the industry if it is to secure a major victory in Paris is to bring policy makers up to speed with the capabilities of solar so they can negotiate with the most up to date information.

"One issue is the cost, expectations and potential of solar; that is something we're wrestling with at UK level and at EU level. The industry is educating ministers and the powers that be to show the cost coming down, its potential for grid parity and to contribute to the energy mix. So at many levels and on many fronts we're all working hard to provide an evidence-based and

Money problems



As European countries continue to transform the shape of their renewable energy support at the behest of the European Commission, the profile of investors will change too. Unpredictable auctions and growing exposure to prices on the energy market will enforce changes.

Richard Slark (pictured), head of renewables at Poyry Management Consulting, which recently published a report on shifting solar support in Europe, says that the move on continental Europe towards market-price risk is only part of the problem.

"It's in tandem with the ageing of projects," he explains. "When valuing an asset, the life of that asset is increasingly including a period when they will no longer receive feed-in tariff support. That means not only are investors' existing portfolios becoming increasingly exposed to market prices, so too are new investments."

The switch to auctions is also creating a potential headache for investors. Instead of applying for a FiT and getting it, developers must accept that pre-construction work on some projects will be wasted if its bid is unsuccessful. Slark says that means developers need to secure a better margin from the projects that are successful.

Germany, France and the UK are all operating competitive, capped procurement rounds at present – is there now a danger that the solar industry won't be able to produce enough projects to fulfil investor appetite?

"There's undoubtedly a risk," says Slark, "and experience shows us that a move between support mechanisms tends to lead to a hiatus in projects coming forward as everyone scrambles to understand how the new mechanism will work. Investors, both debt and equity, need to get comfortable and it all leads to a slowdown in projects coming forward. The reduction in the supply of new investment opportunities will force some investors to look to put their money elsewhere."

rational approach to solar development.

Once the facts are known, we're convinced ministers will follow up with appropriate policy," says Fornal.

The continent is redesigning its grid and ensuring the end result is solar friendly is yet another battle the industry faces. A sustainable future is in reach but securing even its more modest output will require the sector to pull together and fight on multiple fronts.

Boom and bust is exhausting; getting beyond boom and bust will require no less hard work, but transitioning from a constant fight for short-term survival to one final battle for a sustainable, long-term future will surely be worth it. Cost reductions continue to exceed outsiders' expectations and if solar can earn a level playing field, it will surely reach widespread, and widely acknowledged, price competitiveness sooner rather than later. Adding that weapon to solar's arsenal would surely end the war. ■