

Back to the drawing board: US utility market rides the wave of change

Policy | Trade tariffs, technology changes, new suppliers and shifting timelines. US developers and EPCs are riding out challenging times. John Parnell looks at the scale of the upheaval and how module pricing and module technology changes are feeding into the day-to-day work of deploying megawatts



Credit: Conti Solar

The more things change, the more they stay the same. This works on a few different levels for the solar industry. The industry does tend to land back on its feet after the now routine rounds of subsidy cuts, regulatory hurdles and trade disputes come to an end, just in time for the next round. The state of constant flux does seem to feel like the modus operandi.

President Trump has proven to be an agent for change for the solar industry. Concerns over the future of the investment tax credit (ITC), the section 201 trade tariffs, steel tariffs, duties now being mulled on inverters, slashed corporation tax rates taking the wind out the sails of the tax credit market, foreign investment rules scuppering project sales... and we're only half-way through his first term.

The 30% safeguard tariffs on modules and cells started in February 2018 offering a degree of the certainty that was missing

while the spectre of even harsher duties lingered.

Despite this, major developers were announcing projects delays and cancellations within months of the tariffs starting. GTM Research put the number at over 3GW. Cypress Creek alone said the tariffs had impacted 1.5GW of projects.

In May, China's authorities surprised most in the industry and moved to cap deployment triggering speculation over a period of oversupply. With a near endless string of capacity expansions announced in China some kind of intervention was perhaps less than surprising. Major Chinese manufacturers were bullish, happy that the resulting drop in price would grease the wheels of demand in other markets and make up for the shortfall at home. In the US, there was hope the price reductions would be passed along and offset the Section 201 tariffs.

"I read some articles where people were

The industry is continuing to install multi-GW levels of solar but the margins for some developers have been trimmed

predicting that in the US you'd be seeing 30 cents a watt modules and it is nowhere near that but it has certainly come down," says Eric Millard, chief commercial officer at Conti Solar. "We saw a very big bump in pricing running up to the tariff and right after the tariff was announced, and that bump has been softening over the last several months. But we haven't seen a major reduction like I saw folks predicting."

Installation figures have suggested that the tariffs are having less of an impact on deployment than many feared but when you look deeper, even deployed MWs can create headaches for developers.

"We're still seeing a lot of projects getting built like they tend to be in states that have more attractive incentives," explains Millard. "But we're also seeing projects that are getting built with the developers still making money but taking a big haircut in order to get the project done. That's because they have certain deadlines they need to hit and if they miss those deadlines the project is worth substantially less, so it wouldn't be worth it for them to do that."

Many companies responded to the looming trade tariffs by stockpiling what equipment they could. Others moved project timelines. As an unintended consequence, those who acted on the Section 201 tariffs now can't benefit from the softening prices.

"With Chinese demand lessening we have seen the market price come down," says George Hershman, general manager for renewable energy at Swinerton. "It's been difficult to fully take advantage of it because projects had been delayed or scheduled to use other product. We'd already started making changes around

module efficiencies and other things and it's tough for some of these utility segments to react fast enough. It's been a good sign but it hasn't been as immediate as we had hoped. We weren't able to suddenly turn projects back on."

Dan Yonkin, VP of asset and fund management at developer Sol Systems, says schedules are still shifting. Just a few days before participating in this article, Sol Systems was asked by an EPC partner to shift a project timeline further into 2019 so that modules could be imported after the tariffs had drop from 30 to 25% on 7 February 2019. He is sceptical about the driver of that module stockpiling.

"My impression was that it was being used as a sales technique by the sellers," suggests Yonkin. "Fast forward a year and you have to question whether that was actually the optimal strategy from the buyers' perspective to accumulate these modules at a higher cost than they are today. How are they going to burn through that capacity while maintaining a competitive advantage in their cost structure?"

High and low

While everyone is getting on with those issues, there's another change in terms of module procurement that is creating challenges – and opportunities – for EPCs in particular.

"We can now get high-efficiency modules for what we might have paid for low efficiency," says Swinerton's Hershman. "Everybody is looking at higher efficiency modules because we are seeing the delta between poly and mono or mono PERC close."

Conti's Millard says assessing the benefits of adding in that price premium for higher performing modules is something that needs to be done on a project by project basis but in states with a sufficiently high level of support or when the negotiated PPA price can support it, then the swap makes sense. A trend established in 2017.

"Last year we ended up using a lot of higher efficiency stuff and particularly in the first half of this year we're seeing lower wattage stuff went out on the economics. We'll see what happens in the next six months," says Millard.

Other variables are shifting in a direction that makes the numbers behind higher performing modules stack up. Hershman lists all the balance of plant costs that are on the rise – steel, fuel and labour chief among them.

"It's about getting more kWh on a smaller footprint," says Hershman. "For every module you don't install, you make a saving. You don't have the copper wire associated to that module, you don't have the labour cost associated to that module. Because that gap is getting closer between high and low-efficiency modules it becomes about land value savings. [Should] project sites get smaller so that you have less grading, for example, all those things come into play. They are coming down to commodity cost too, the glass and the aluminium, all that costs the same for either module. You're not really seeing the big, significant cost increase between the high and low."

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Between the schedule of stepped tariff reductions introduced by the Section 201 tariffs and the shift in global module prices, developers and EPCs are having to be increasingly flexible. Often, this means overhauling planning and design work.

"I would say there have been a dozen smaller utility projects this year that we have had to go through a design review on with our contractors," says Yonkin. "Module availability has an immediate implication on the system. We've been on top of it since last year and we've been proactive about ensuring we didn't create issues for ourselves."

For Swinerton, one of the largest EPCs in the US market, that willingness to adapt to the seemingly ever-changing circumstances has become the new normal.

"In the utility sector right now, over the last year, almost 100% of our work has been redesigned multiple times because of equipment challenges as we continue to chase what module type [is best]. More now than ever we're redesigning on a fairly constant basis. It is taxing on project delivery and being able to get schedule certainty," says Hershman.

With the redesigning and the changing

shape of the module pricing landscape, the door is opening for new suppliers and new technologies.

"The price drop is opening up the market for new players that are exploring different technologies with higher efficiencies. So yes, we've opened up our list of vendors and suppliers to bridge that gap for sure. I'm looking at more mono PERC and potentially more bifacial as we see that move into the market," says Hershman, noting that for now there remain issues about capturing the value of the additional yield.

"We have a lot of projects in the test phase and test data but we have got to turn that into a bankable return so that we can offset the cost of doing it. If you're not able to bank the return then it's going to be difficult. I think there will be a lot of projects that move forward next year that will start to build, because of players in the industry that are able to finance differently, and that will drive up bankability," he adds.

Domesticated

Announcements of impending capacity in the US itself, while welcome, won't contribute to the first 12 month period of the tariffs with the strongest 30% rates in play. Hanwha Q CELLS will start operation at its 1.6GW module assembly plant in Georgia in February 2019. In total, more than 2GW of new capacity should come online. The section 201 tariffs are not applied to the first 2.5GW of cell imports and this quota was used up very quickly this year. US import data seen by PV Tech shows imports of cells (not made up into modules) from China shot up by 400% in Q1 2018. The same figure for Vietnam was 1,200%. Malaysia was the biggest source (US\$33 million) just ahead of the Philippines on US\$22 million.

Millard, Yonkin and Hershman all said they had talked to the vendors involved in developing new US capacity but it was too early to discuss orders at this stage. In the case of Hanwha Q CELLS, the utility market needs to know what if anything will be produced for them.

The tariffs might look like they've been a success on paper, with GWs deployed and new factories announced, but the reality is that the industry is working harder than ever to juggle the changes and account for global technology and pricing trends at the same time. A less agile, resilient and resourceful industry might not have coped as well. Further evidence, if any were needed, of why the US administration should consider its solar sector to be an enormous asset. ■