

Can US double-up on bifacial in wake of tariff reprieve?

Bifacial | The US announced an exemption from Section 201 trade tariffs in June. But with a limited bifacial project pipeline in place and questions around supply, will the ruling really open the door to the technology? John Parnell investigates

In mid-June, the US solar industry scored a lobbying victory, winning an exemption for bifacial modules from the Section 201 trade import tariffs. The move hands an advantage to a nascent technology with little track record in the US.

With the phase-out of the investment tax credit (ITC) imminent, many developers are keen to build out as many megawatts as possible. The question is whether the most efficient way to do that is to stick to tried and tested monofacial panels or twist, and bank the rearside power, while the exemption offsets the price differential.

The exemption is an effective 25% discount versus standard modules affected by the tariff. From February 2020 that will fall to 20% before dropping to 15% in 2021 and lapsing entirely in 2022.

To take advantage though, developers will need to be ready now.

"I'm only aware of one operational [bifacial] project in the US, the Southern Oak project in Georgia," says Xiaojing Sun, a senior research analyst, at Wood Mackenzie. "The sentiment I feel talking with our clients, and a lot of our clients are EPCs and developers, is that a lot of companies are looking at [bifacial] but Georgia Power was the first mover.

Southern Oak was grid connected in February with LONGi's bifacial modules used. The finance arranged will largely ignore the rearside power in the early years of the project's life, before a 're-mortgaging' of sorts, once project-specific data has been gathered on those rearside kilowatt hours.

"Two tax equity investors I've spoken with don't really think of it as being that different from a regular monofacial solar project. They have many years build-



Credit: John Parnell

ing regular solar projects and they are confident that bifacial solar projects can be financed through tax equity," says Sun, who expects debt providers to be a little more cautious. Despite that, the developers she has talked with are making plans now.

"A lot of the projects our clients are considering would be coming online as early as next year and we could see a lot in 2021. The developers I've talked to are comfortable with the technology."

The exemption

Gary Liardon is COO at Petersen Dean's roofing and solar consumer division. As a board director of the US Solar Energy Industries Association (SEIA) he

A LONGi bifacial array. The US has an opportunity to embrace bifacial solar technology thanks to recent tariff exemptions

was involved in the efforts to win the exemption. He describes the process, and ongoing lobbying work, as unpredictable.

"The current administration is more of a wildcard than administrations of the past. It's important to note that the lobbying for this didn't start six months ago, this is a piggyback on some of the original trade cases surrounding import duties. It's been ongoing for some time," reveals Liardon. "It was less a case of a laser-focussed target on this as a possible exemption versus going after a number of exemptions and this being the one that landed.

"Other exemptions are ongoing but we don't have huge confidence that we'll get other exemptions, particularly around

China, which is being targeted with duties. The exemptions are more about specific countries than specific products. The real headway there is if we can get exemptions but also to make sure tariffs aren't applied to countries that don't have them today," he adds.

With no substantial capacity for bifacial cells or modules in the US and certainly none to speak of during time period that "harm" was measured for the previous trade tariffs, opening the door to bifacial modules makes sense. Domestic manufacturing damage is minimal and US developers can exploit the benefits of the emerging technology.

"The industry is still tiptoeing around bifacial," says WoodMac's Sun. "The majority of those [projects] that have been built are in China via the Top Runner programme. They were incentivised. That means a lot of the project knowhow is in China and the US is a relative newcomer. When things are new it's reasonable for people to demonstrate a little caution."

With the exemption in place and the ITC sunset, Sun believes the stars could be aligning nicely for an initial rollout that will pave the way beyond 2022.

"The next two years we'll see it become that bit more normal to developers and financiers. It could pave the way for the normalisation of bifacial post-2022," she suggests.

"The more bifacial products there are the more comfortable people will be with the technology, even after the 201 tariffs have gone," she says. The question of how much gain to factor in from the rearside is a nice problem to have. Sun says if developers and lenders can build confidence in a gain of even 5%, it will represent great progress.

In the immediate wake of the exemption, Joe Song, director of project operations at developer Sol Systems was not confident of an immediate bump for bifacial.

"It's important to note that just because an exemption was put in place, it will not result in a sudden increase in product availability for the next nine to 12 months. We still face a supply-constrained market, which means pricing is unlikely to drop meaningfully," he told PV Tech in June.

But Sun believes that as the utility solar market swells in the US, and the new Chinese subsidy regime kicks in, there are opportunities for bifacial.

"The bifacial exemption from the 201 tariffs will have a pretty significant impact

on utility-scale solar. That's the main application and where the excitement is that we hear from our clients. The utility-scale market will be 6-7GW this year and higher again in 2020," she says.

"You need to keep in mind that there is also a step-down in the 201 tariffs and by the end of four years they will go away completely. That means the advantage of the exemption can only last two and half years then we're back to a level playing field. But I think those two years are enough for utility-scale developers to jump on the opportunity as those two years also coincide with the ITC step-downs and the rush to build."

China: shifting supply, sagging demand

Tackling the supply problem that Song highlights requires a more in-depth look not in the US but in China.

With China's old subsidy regime sidelined, support for bifacial solar is now minimal. The new system saw developers bid for a premium over and above the benchmark price in each area. With the result not out until earlier this summer, they face very tight construction deadlines before automatic step-downs in the support they receive begin to chip away at project economics.

Sun expects this will see developers looking to balance capex and high performance but not adopting a pure focus on

levelised cost of electricity (LCOE): "I think that means we'll see a lot of mono-PERC, that's the sweet spot; I'm not so bullish about bifacial in China without the Top Runner programme, however."

With solar products from mainland China facing section 201 and section 301 tariffs, Sun expects some existing mono-PERC capacity in Southeast Asia to be converted to bifacial.

"It is not a very difficult process, it can be done in two to four months. The exemption came out in mid-June and we're likely to see from 2020 more bifacial products in the US from Chinese companies that can circumvent both 201 and 301 tariffs," says Sun. That would bolster the volume available to the US market where suppliers could expect to receive a higher price than at home.

But the US won't have an entirely clear run at that capacity. Sun says the biggest pipeline for bifacial projects right now is in Latin America. If those are financed and shovel ready before US projects, they might find themselves at the back of that queue. Bifacial projects are finding their way onto rooftops in Malaysia, the green fields of England's North West and sections of the massive Benban solar park complex in Egypt. Momentum is growing and the US has an opportunity to embed bifacial knowhow and build a bank of project data in good time for the potential end of the ITC. It should grab it with both hands. ■

Bifacial rooftop prospects looking up

Rooftops are not the obvious place for bifacial modules to make an early mark but PetersenDean's Gary Liardon believes there is an opportunity brewing in California.

From 2020 all new homes in California will need to include solar one way or another. The combination of smaller plot footprints and changing preferences in architectural style is opening the door to bifacial modules.

"From a roofing efficiency standpoint, it's driven by design," explains Liardon. "The traditional Santa Barbara-style housing has moved towards something more contemporary, sleeker lines, and that lends itself to these very simple rooflines, so we're seeing more use of low-slope roofing with this reflective membrane and perhaps small portions in tiles. But the trend is for the primary functioning part of the roof to be low-slope.



Credit: PetersenDean Roofing & Solar

The door is opening for bifacial modules on solar rooftops in California