Regulatory roadblocks ahead for EU subsidy-free solar

Policy | Despite its coming of age from the days of state support, European PV remains at the mercy of regulatory whims. José Rojo examines how bureaucracy, grid bottlenecks and other pitfalls of government action can cripple solar as it becomes the driving force of a clean EU energy system

Credit: BayWa r.e.

The 175MW Don Rodrigo project in Spain has been a standard bearer for European unsubsidised solar

Goals for EU-wide installed solar capacity to double by 2030, and double once more between then and 2050. A widely lauded EU legislative framework setting how the technology must, alongside all other renewables, accomplish such explosive growth. Countries translating the big-picture EU vision into the nitty-gritty of predictable, hard policy plans. Nosediving technology costs curbing the need for subsidies. Is European solar poised for a golden age, mere years after hitting rock bottom?

The view on the ground is, as it turns out, not so rosy. The hundreds of attendees pouring into the Large Scale Solar Europe 2019 summit in March were, in equal measure, enthusiastic about the subsidy-free potential and clearheaded as to the trials ahead. Whether headline pledges are accompanied by a genuine will to bring down structural obstacles was a question looming over the Lisbon event; Portugal, the host country, was openly criticised for pushing for a solar surge – from 572MW in 2018 to 8.1GW-9.9GW by 2030 – without solving grid and permit issues first.

The questions extended well beyond Europe's westernmost state, however. Live audience polling found inadequate regulatory frameworks are seen as the top obstacle (53%) to zero-subsidy solar across all countries, far ahead of the lack of bankable PPA offtakers (26%) or inexperience with PPA negotiations (13%). From developers to investors and banks, all constituents of the solar ecosystem used panel discussions to voice regulatory concerns of some nature. The industry's fierce fight for independence from subsidies has left it all too alert to the dangers of government intervention.

All eyes on Spain

That misguided policy can hurt is a lesson Spain, of all countries, is not likely to ignore. The country may be today a byword for unsubsidised potential – event polls placed it as top EU destination on this front – but few can have forgotten how quick and intense the collapse was when politicians scrapped feed-in tariff (FiT) support in the early 2010s.

Though far less of a threat, the Spanish current regulatory framework is not roadblock-free. José Donoso, head of national PV association UNEF, tells *PV Tech Power* subsidy-free projects in particular can be held back by the country's power market design. The marginality principle

Credit: UNEF

UNEF's Donoso is wary of the potential for the grid to hold back Spanish solar

of auctions – where all developers are contracted at the highest price of all tabled bids – muddles the price signals investors receive and raises financing costs for the merchant side of projects, Donoso explains.

Beyond the merchant sphere, PV projects of all stripes face a controversial 7% energy generation tax, applicable again after the end of a six-month freeze. The levy can significantly eat into developers' margins but will be, UNEF hopes, quashed by an EU court ruling expected in months, Donoso says.

Elsewhere, land procurement and project structuring are not an issue as much as a time-consuming administrative process. "Energy and environmental bodies need more resources to deal with the current avalanche of projects," Donoso says. UNEF is keen on decentralisation: the association believes allowing regions to directly green-light projects until 200MW, up from the current 50MW limit, would help clear the backlog.

Legislation specifics aside, Spain's old ghost – that of political disruption – lurks closer once more. The renewable vision of Environment minister Teresa Ribero, widely respected by solar players approached by *PV Tech Power* at the summit, is in the air after a snap general election was called for 28 April. Judging by recent polls, a triple coalition could bring the Popular Party – the author of the FiT u-turn years back – closer to power; if it wins, whether it will stick to Ribero's draft plans for 37GW of solar by 2030 remains anybody's guess at this point.

Italy plays catch-up

The zero-subsidy spotlight has mostly ignored Italian PV to date but the picture is slowly shifting, Bird & Bird partner Pierpaolo Mastromarini says. According to him, the phase-out of subsidies in the early 2010s brought large-scale deployment to a screeching halt. Deterred by high capex costs, investors shunned the country for years but are now looking anew as the economics improve. Although still muted, the budding pipeline now features unsubsidised Octopus projects, with PPAs signed with Shell and energy trader EGO Group.

Judging by Mastromarini's words, the regulatory roadblocks going forward are numerous. Projects typically wait up to two years to be authorised and face the prospect of uneven, unpredictable regional and local rules, such as Sicily's attempt – unsuccessful for now – to limit ground-mounted projects on farming land. Diverging grid dispatching prices, the costs and complexity of acquiring land and "unstructured" Italian developers add to the problems. "[Local developers] may not speak English very well, or promise investors results that may not be delivered," Mastromarini says.

Regulatory risks too are apparent across Europe's less-sunny reaches. Bird & Bird senior associate Levent Gürdenli says the planning and grid connection process in the UK – home to 4.2GW in unsubsidised large-scale projects – is "well understood" but acknowledges impacts from certain policy swings: behind-the-meter schemes, for instance, will be particularly hit by the embedded benefit phase-out under the Targeted Charging Review. There is also Brexit, the very embodiment of regulatory risks, to be considered; Gürdenli lists import tariffs, employee visas, FX rates and power price volatility among the potential impacts.

Cracking the PPA code

No regulatory barrier, not even Brexit, can match the long shadow cast by PPAs over the subsidy-free solar debate. Success bagging these deals is typically seen as dictated by market dynamics and negotiation skills, not government intervention. However, as evidenced by conversations for this feature, a host of factors in national frameworks – from macroeconomics to the legal fine print – can hasten or hinder the journey towards the PPA signing point.

Take Germany. The country may have built a colossal PV industry – 46GW at IRENA's latest count – off the back of a solid FiT scheme but has yet to become a "corporate PPA place", says Bird & Bird counsel Lars Kyrberg. German operators, he adds, are "warming up" to the approach but "minor barriers" exist in an otherwise conductive framework; one is ambiguity as to whether corporate PPAs are legally compatible with FiT support, a mix favoured by corporates.

The Netherlands, these days often singled out as a PV market-to-watch, retains generous subsidies under the SDE+ programme but also offers strengths for those mulling the subsidy-free route. According to Bird & Bird partner Sophie Dingenen, mandatory separation of commercial utilities and grid operators means corporate PPAs can be signed without the need of a traditional energy company; grid operators take care of sleeving, and balancing is handled by a specialist, she adds.

Her colleague Mastromarini paints a slightly more circumspect picture for Italy. The renewed attention from banks and investors creates hopes that the market for long-term PPAs will take off "very soon". However, he adds, many financiers are waiting to see the first subsidy-free projects realised. "They are at the window," says the partner. "A problem is the current PPA market is driven by pure traders, who unfortunately sometimes come with weak balance sheets."

Grid risks take centre stage

However helpful the regulation becomes, however adept solar players become at the PPA game, the zero-subsidy boom could falter if the grid cannot take it. Insufficient expansion was voted the top regulatory risk (50%) for unsubsidised projects at the Lisbon event, ahead of bureaucracy (30%) and policy swings (20%).

Congestion in Spain has been a particular concern for subsidy-free operators, with some predicting its grid could "collapse" if the current renewable pipeline went online. Operator Red Eléctrica de España (REE) pledged in late March €3.2 billion for grid upgrades between 2018 and 2022, earmarking €1.5 billion of the total for renewables integration.

UNEF's Donoso believes grid planning will be the "pivotal" element of Spain's ecological transition, which under draft plans has to deliver 37GW of installed PV capacity by 2030. "Flexibility and timeliness with grid concessions is key as the process is slow and troublesome," he says. "The administrative process for new lines can take up to five years – this should be halved."

Donoso also calls for a crackdown on what he describes as "market abuse" by so-called hub interlocutors. Operators under this figure, created by the earlier government, are meant to quickly process connection requests but sometimes cause intentional delays to arrange auction-like proceedings, Donoso says, adding: "It's a position of privilege. REE should take control of the process."

The congestion conundrum

For its part, neighbour Portugal won't escape congestion risks either. Ângelo Sarmento, who sits on EDP's executive board, spoke at the Lisbon event of the challenges that will come with integrating the country's dispersed renewable generation with consumers clustered around the capital and the city of Porto. "Complexity will rise rapidly," he told attendees. "Intermittency will require investment in the networks, new technology and upskilling."

Others were explicit in their criticisms. "Grid and time-consuming permissions remain the top obstacle here…it doesn't come as fantastic news to hear the government is tendering anyway," said Dr Benedikt Ortmann, managing director and head of solar projects at BayWa r.e, as he explained why his firm opted for Spain as home to its unsubsidised 175MW Don Rodrigo project. Approached later by *PV Tech Power*, he warned one of Portugal's planned two auction modalities – allowing firms to bid for capacity in the grid – may result in "speculative" bids from players with still-hazy projects.

The grid concerns extend beyond Iberia, however. Bird & Bird's Mastromarini says Italy will need a "very detailed plan" to integrate renewables given the risks of local congestion, as well as costs from forced production freezes when authorities step in to resolve imbalances. Gürdenli says UK bottlenecks will likely worsen, particularly in Britain's southwest, amid pressure from EVs and other trends. UK policymakers, he adds, could help ease congestion by introducing a separate connection process for projects benefitting the grid, including those featuring grid-scale storage.

Across the North Sea, grid overcrowding is – together with opposition by protest groups – the top obstacle for Dutch subsidy-free solar, says Dingenen. "Capacity in congested areas is becoming scarce," she notes. Her German colleague Kyrberg says grid constraints in the country are more of a challenge for wind operators, whereas PV's issues are more localised. Unlike his peers, Kyrberg expects legislation to improve the situation. "In Germany, the operator must enhance the grid if there's a critical constraint for a renewable plant," he points out. "It's just a question of how long it takes."

PV: The Brussels view

European states may be tasked with the specifics of boosting PV in the decades to come but the unifying, big-picture vision will rest with Brussels.

Walburga Hemetsberger, CEO at SolarPower Europe, says the association is "very happy" with the direction of travel set by the European Commission. The heaps of legislation painstakingly proposed, negotiated and adopted over the past four years of Jean-Claude Juncker's presidency – including laws on renewables, energy efficiency and low-energy buildings – have been a "big success" for the solar industry, she says, adding: "The 32% goal for 2030 is very much what we wanted, while the governance framework will be instrumental to make sure countries deliver on it."

Speaking at the Lisbon event, Paula Abreu Marques, head of the Commission's renewable policy unit, outlined how the hundreds of pages of fresh legislation will help counter some of solar's *bête noires*. Countries will be banned from subsidy policy u-turns and forced to set out a clear auctioning timetable, as well as a single administrative contact point for projects. In addition, governments will have to quantify grid investment and will be supported by EU funding schemes as they work to upgrade the network, Abreu said.

Also, and in a nod to subsidy-free players, states will now be legally bound to remove "unjustified" barriers to national PPA markets. SolarPower Europe welcomes the move but acknowledges there are "a lot of question marks" over how the barrier-removal will work out in practice, says Hemetsberger. Her Spanish counterpart Donoso is not too keen on government intervention. "Spain lacks specific legislation for PPAs but we'd rather it stays that way – the risk is to end up with something worse," he says.


Credit: SolarPower Europe

Hemetsburger is keen to see the details of new European policies once the new executive is installed

An EU vision for solar

Whatever its victories, Jean-Claude Juncker's Commission is fast approaching the finish line. The new EU executive resulting from fresh elections this May faces an extensive list of asks from SolarPower Europe: a 20%-by-2030 solar target, together with 30 million solar roofs and 300,000 solar jobs by that year.

The new Commission is likely to sympathise with the demands – Abreu's Lisbon presentation showed it assigns a "central" role to the industry – but will have plenty to worry about other than PV. Brexit aside, the open fronts include economic deceleration, citizen unrest, the rise of populism and rebellious governments in Rome, Warsaw and others.

Behind-the-scenes conversations in Lisbon showed few believe the EU's structural woes can, however pressing, become a direct threat to subsidy-free solar. However, a reliance on free-market conditions and investor confidence means the industry could become a collateral victim of precisely the macro-instability experts warn is brewing in the bloc; bankable PPA arrangements could become even rarer if the Italy-driven Eurozone crisis some are now predicting comes to pass.

Whichever Europe emerges the other side of the current turmoil, the solar industry appears ready to continue the dialogue. "Who knows? Polls are polls, but we do very much hope we'll have a constructive European Parliament and Commission after the election," says Hemetsberger. "It's crucial that legislation continues bringing the European idea forward – this is not just about renewables but also ensuring Europe reaps social and economic benefits from the transition." ■

Turn to p.62 for further insights into the post-subsidy financing of European solar