

Beyond subsidies

Olivia Gagan

02/10/2018

(Originally published in the [Summer 2017](#) edition of IJGlobal)

Some of the most common criticisms levelled at the renewable energy sector are becoming increasingly hard to stand up. Claims that relying on changeable weather, and new technology, for electricity is too risky can now be countered by many years of reliable performance by established wind and solar power plants.

Yet a lingering argument, and probably the most compelling historical one against renewables generation, is that it is too expensive. Why spend considerable sums of money subsidising renewables when the operational life of an existing, low-carbon, high capacity nuclear power plant can be extended for another 10 years at a far lower cost, or when brand-new gas-fired plants stand idled across Europe?

The line of reasoning that conventional forms of power are cheaper, more reliable and require less support than renewables has been used to keep burning indigenous brown coal in German thermal plants and has supported the creation of a pipeline of new nuclear in the UK. But over the past 18 months the argument that renewables technologies require more subsidies than conventional generators has been countered by some unprecedented low bids in open tender auctions. And some planned projects are now set to be constructed without using any subsidy at all.

Depressed oil and gas prices and international carbon reduction commitments in the wake of COP21 have supported the economics of greenfield renewables development. But a key, and growing, driver of bringing renewables on a par with conventional power has been a shift towards race-to-the-bottom competitive auctions, rather than tenders offering fixed feed-in tariffs.

Germany switched to a competitive auction system on the 1 January 2017. In April its energy regulator, the Bundesnetzagentur, named the winners in the first offshore wind auction, which could have far-reaching consequences for the European energy industry.

Up to 1.55GW of capacity was on offer for existing, in-development projects waiting to be awarded a grid connection and government funding. German utility EnBW took the lion's share of the available capacity entering a bid without subsidy support for the 900MW He Dreiht project. Denmark's DONG Energy was the other winner, with three projects. For two of these – OWP West and Borkum Riffgrund West 2 – it made zero-tariff bids. Its Gode Wind 3 project was awarded on a bid of €60 per MWh.

These bids significantly undercut the tariffs seen previously in renewables, even in conventional power: the UK's Hinkley Point C nuclear project, for example, holds a £92.50/\$120.4 per MWh contract for difference (CfD), a tariff which represents the guaranteed prices its sponsors will receive for the electricity the plant generates.

The onshore wind sector tells a similar story, albeit with a slower descent in pricing than offshore. In Europe's most recent onshore wind auction in May 2017, a switch from fixed tariffs to auctions led to some all-time low subsidies awarded. The average bid amount was €57.10 (\$63.70) per MWh in Germany for onshore wind, and €43 per MWh in

Spain.

Moving the market

EnBW and DONG's German offshore wind auction bids have already had an effect on other sponsors' strategies. At an *IJGlobal* renewables event in Scotland in May 2017, developers and lenders alike seemed unanimous that bids for future energy auctions in Europe will have to come in below the £100/\$100 per MWh mark, irrespective of actual costs.

Some market participants suggest that high tariffs will increasingly look like state aid.

In Belgium, North Sea Minister Philippe de Backer has called for three offshore wind concessions to be cancelled, saying the projects should be re-tendered in light of the prices achieved elsewhere in Europe.

The Renewable Energy Association's senior policy analyst Frank Gordon says the UK, traditionally an offshore wind forerunner, could struggle to compete with the new price assumptions. He says of the UK, "the main price determinant is grid connection cost and this varies considerably by location-only those with the best grid and offtaker setup will be able to be subsidy free at this stage."

But those already awarded higher contracts should become attractive acquisition opportunities. The as-yet unbuilt Neart na Gaoithe offshore wind project in the UK, for example, holds an inflation-linked, 15-year, £123.47 per MWh CfD, a tariff unlikely to be awarded again.

That is, if these low prices can be sustained. The energy industry seemed surprised by the German offshore wind bids, and the German government was too. "The average weighted award price of 0.44 cents per kilowatt hour is far below expectations... which will lead to a reduction in funding to an extent that had not been expected," Bundesnetzagentur president Jochen Homann said at the time.

"Offshore wind energy is categorically proving its competitiveness... it remains to be seen, however, whether the prices in the next auction will be as low."

Perhaps the industry should be less surprised by the German results. As project costs come down and trust is gained in specific technologies and sectors, state support should theoretically reduce. But the relationship between the tariff a developer bids for and the actual cost of building a project is becoming harder to establish.

Simon Luby, global head of due diligence at technical consultant K2 Management, says there is no longer a clear-cut relationship between bids and actual project cost. "Without economic and political factors, we wouldn't have had these bid levels," he says.

Rather than renewables projects development costs being calculated on technology, materials and man hours needed, and bids for subsidies being based around that, Luby says a whole host of other factors are now more pressing considerations when deciding how much you can afford to build a project for – like holding on to staff.

Of the steep drops in assumed costs seen over the past year, Luby says the likes of EnBW and DONG Energy now have large offshore wind development teams to think of. "Sponsors are not pricing their bids on the cost of the project – they're pricing on the cost to them if they don't secure the project," he says. "If they don't win, what would their project teams do for the next two years? Once you've lost specialised staff, you don't tend to get them back."

Others have suggested that EnBW and DONG Energy's bids – at prices that were deemed impossible even eighteen months ago, when DONG Energy said its goal was just to reach costs of €100 per MWh by 2020 – are literally staking a claim on the development area. One lender called the bids "a €60 million option" on building the projects, rather than a firm commitment. That is the estimate of the bid bond the sponsors have to pay.

For EnBW and DONG, shareholders are also watching. By guaranteeing access to the German electricity market well into the 2020s – as has been done with the latest offshore wind auctions – gives the utilities a growth trajectory, which for listed giants, is arguably as important as revenues.

Both are taking a punt on wholesale power prices increasing and technology improving: a buy-now, pay-later strategy. It is worth noting that according to European Commission, wholesale electricity prices reached their lowest levels for 12 years in 2016. EnBW openly stated that it is banking on electricity prices and greater turbine efficiencies in the time between now and 2021 when it will have to make a final investment decision on the He Dreiht project.

Mark Muldowney, managing director for energy and infrastructure at BNP Paribas said the lending market will factor this unpredictability. In a subsidy free European renewables arena, “market price risk is going to be the overwhelming challenge for lenders,” Muldowney says.

“To what extent will they be willing to take it? Lenders were comfortable with tariff regimes because the fixed revenues provide cover. Taking full merchant exposure is a much bigger ask and could result in much lower gearing than we’ve seen in the past.”

Survival of the leanest

Subsidies for individual European renewables projects could generate strong, regulated 9-10% returns just two or three years ago, but these are now expected to be more around the 3-4% mark for established technologies. Those earlier high returns might look like a better deal for project owners rather than taxpayers, but Luby says “because of subsidies, companies have been able to put investment into the supply chain: the staff, the factories and the technology.”

Now, the supply chain will have to provide much cheaper prices. But “in return for lower prices, they’ll want forward orders,” Luby says. He suggests that what suppliers, particularly in offshore wind, might lose higher prices for their services, they may gain in the increased scale and predictability of a new, super-competitive market. “When people weren’t sure how busy they’d be, they would price that in. DONG putting in an order for five sub-stations means a yard is full for two or three years,” he asserts.

Newcomers to the industry will be hardest hit, he suggests. “There will be casualties, but for suppliers already established now, there are good forward order books. There’s enough consistency.”

In the UK, the results of this summer’s latest CfD auction in the autumn will be another yardstick for bid pricing. There are reports of unestablished marine power projects bidding in at sub-£100 per MWh, prices which seem bold for an emerging technology.

Luby says the industry, and governments, will have to decide whether to stick with their established technologies or whether to plough cash into new forms of electricity generation. “If offshore wind shows it can deliver at these costs, then the savings should move across into wave and tidal. However, governments would likely have to throw a lot of money at a big project to kick-start the supply chain first. Or are we going to cut it loose?”

Luby foresees a future in Europe where “renewables will be treated just like any other generator. To some extent this is a good thing – it’s increasingly seen as a mature technology, without an alternative or green label.” The switch from a subsidy supported industry to a leaner, market driven industry has sped up in 2017 – but it will take several years to see whether the assumptions these new pricings have been built on can hold up.

Thank you for printing this article from IJGlobal.

As the leading online publication serving the infrastructure investment market, IJGlobal is read daily by decision-makers within investment banks, international law firms, advisory firms, institutional investors and governments.

If you have been given this article by a subscriber, you can contact us through www.ijglobal.com/sign-in, or call our London office on +44 (0)20 7779 8870 to discuss our subscription options.