

Making bubbles while the sun shines

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It always pays to keep a weather eye out for the next financial bubble, after all, we've seen enough of them in recent times to warrant wariness. Right now there's a splendid one brewing in the international renewable energy space that should have you all bracing for impact.

The challenge here when calling a bubble is not to join the foaming-mouthed masses who claimed victory when the global financial crisis bit, insisting they called it... having in reality bull-horned the same message for the previous couple of decades.

It's hard to work out which is better: those who crowed at their hollow victory having cried wolf for years on end, those who were wise after the fact, or those who realised too late that the noose was around their neck and promptly lost all dignity not wanting the party to end.

Looking back over the last 10 bruising years, there have been a few notable bubbles in the infrastructure and energy space.

Of those, the secondary market for PPP assets would probably take top billing. As one old chum put it, he would follow that with "regulated utilities and... yeah... most secondary assets".

Then you have the glorious bubble that's growing around zero pricing in offshore wind – tackled in a previous <u>Friday</u> <u>missive</u> – and now we get to the one we want to look at today... solar power.

Have you noticed these days that every solar story you read – photovoltaic, of course – trumpets the lowest pricing achieved?

The price is light...

Prices are plummeting on solar in much the same way they are plummeting on offshore wind for pretty much the same reasons – though do bear in mind that pricing is driven in two ways: those with a feed-in tariff and those set by competitive auctions (the latter being where we are seeing the majority of eye-wateringly low numbers).

It's a far-flung market and the data you pull together for a piece like this (all currencies in USD per kw/h) is impressively varied:

- \$0.01785 Saudi Arabia
- \$0.0242 Abu Dhabi
- \$0.0291 Chile
- \$0.0299 Dubai
- \$0.038 India
- \$0.06 Philippines

- \$0.087 Australia
- \$0.12 Vietnam
- \$0.145 Indonesia
- \$0.15 Taiwan
- \$0.255 Japan

At those prices, it is difficult to believe this is a sustainable model.

Under the spotlight

Talking to folk in the industry this week, there is a widely-held view that – while we're not quite there yet – there's a point at which things will start to go horribly wrong in solar PV.

And what's driving it all? Ach, it's the same culprit as it always is these days – paucity of opportunity and a wall of liquidity... all the right ingredients for a bubble.

As one senior source in the Middle East solar race says: "The issue for me is that everyone on the equity side is competing to win deals so they are reducing their returns.

"They are pushing the EPC contractors to take more risk as well as pushing the banks to take more aggressive financings on cheaper terms... because that's what ultimately gets you a winning tariff."

And that winning tariff will be swiftly followed by a headline heralding a new low in solar pricing, something that is happily received by the unwashed masses (who immediately start questioning why we even bother with nuclear), but not so much by infra professionals.

There has to be a tipping point for pricing and it will be damaging when that is reached. After all, there's always a hard landing for the winner in the race to the bottom.

"You can only do that [lower prices] for so long before something goes wrong," says another senior source. "It will go wrong in the offshore wind space as they are technically complicated projects and the same stands true for solar as they are using new technology as one of the means for cost reduction.

"We all remember what happened in the gas turbine market when everyone was trying to get the most efficient turbine technology by increasing the heat and pressure. It ended up with GE and Alstom machines not working properly.

"You can see that happening in offshore wind where we have gone in the space of three years from 3.6MW turbines to 10MW, and people are now talking about 16MW."

Heading south to catch the rays

Over the last 10 years we have witnessed a massive drop-off in the cost of solar panels. In such instances, it's reasonable to take a balance sheet risk when bidding a project that will be built in the next couple of years – taking a punt on future EPC prices continuing to trend downwards.

It's a gamble, but a fairly safe bet.

"That strategy is not a typical project finance strategy – reduce all the risks, eliminate all the risks, only invest and bank something that is predictable," says one senior infra figure. "It is a risk, but if you are always looking back over your shoulder at what has happened in the past, you never have progress."

However, he adds: "The risk is the presumption that whenever you build something, there is going to be 100% demand for it going forward – and that's patently not correct. If somebody enters into a PPA with you for the next 20 years, it doesn't really matter as you have price security.

"When you're in a merchant-style market where you are having to take market risk, that's just nonsensical. What is

happening on these projects is that people are expecting costs to go down and for tariffs to increase."

And that's linear thinking.

A little while back the UK went mad for a news story when some organisation-or-another claimed that it would have to build 10 nuclear power plants to cope with demand in 2040 once sales were stopped for diesel and petrol cars.

Poppycock, of course.

Back in the early 2000s, we wrote story after story anticipating £30 billion of waste projects in the UK to cope with rising demand. Nobody took into account household recycling which swept the nation and transformed collection, requirement for sorting and reduced (free of charge) the amount of waste being sent to landfill.

In much the same way, the anticipated rise in electricity usage is not a dead certainty. Everything from smart meters through to efficiency, LED light bulbs, micro renewables, increased uptake on household solar, Elon Musk, etc. will serve as a similar game changer in this energy space – driving down usage.

"People who are baking in tariff and capacity increases into the future, justifying the investment decision today where they are taking merchant-style risk rather than contracted revenues – are taking very real risk," says a renewable energy source.

"However, it's all crystal-ball gazing as to where that is going to go."

What you can be confident of, however, is that fund managers with an eye to securing fees will shift money out the door with nonsensical abandon, lenders will be dragged in on the back of relationships, and EPC contractors will start praying that the dice land in their favour.

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