

Tesla already forcing down battery storage prices in Australia

By Giles Parkinson

The release of the Tesla battery storage concept at the end of April has certainly changed the discourse around battery storage, and caused some to rethink their energy business models. And it appears it is already having an impact on prices in the nascent Australian battery storage market.

Two wholesale pricing announcements have caught the eye in recent weeks. One is the pricing on the 7.2kWh Legato product from AU Optronics that AGL Energy is making available to consumers in Queensland this month.

According to wholesale pricing offers, the 7.2kWh system is being offered at around \$A14,000. The significance of this? At around \$A2,020/kWh, it is down by more than one-third of the price offered for similar battery storage applications just six months ago. The average pricing last November had been around \$A3,200/kWh.

Individual PowerLegato Price			BenQ Solar 250W Solar Modules			Total Bundle
7.2kWh	\$14,550	+	4.5kW	\$3,825	=	\$18,375
4.8kWh	\$11,750		3.5kW	\$2,975		\$14,725
2.4kWh	\$8,990		2.5kW	\$2,125		\$11,115
Low price per kWh of storage - From \$2,020 per kWh						

That experience is repeated in the latest pricing news from solar wholesaler and distributor Solar Juice, which is offering a 3.6kWh Samsung battery storage product, with inverters and smart meters, for \$A7,999.

Andrew Burgess, co-founder and director of Solar Juice, says the pricing came down 30 per cent during negotiations, which had lasted six months. "The roadmap is for reduction of 25 per cent per annum moving forward for the short term. Exciting times."

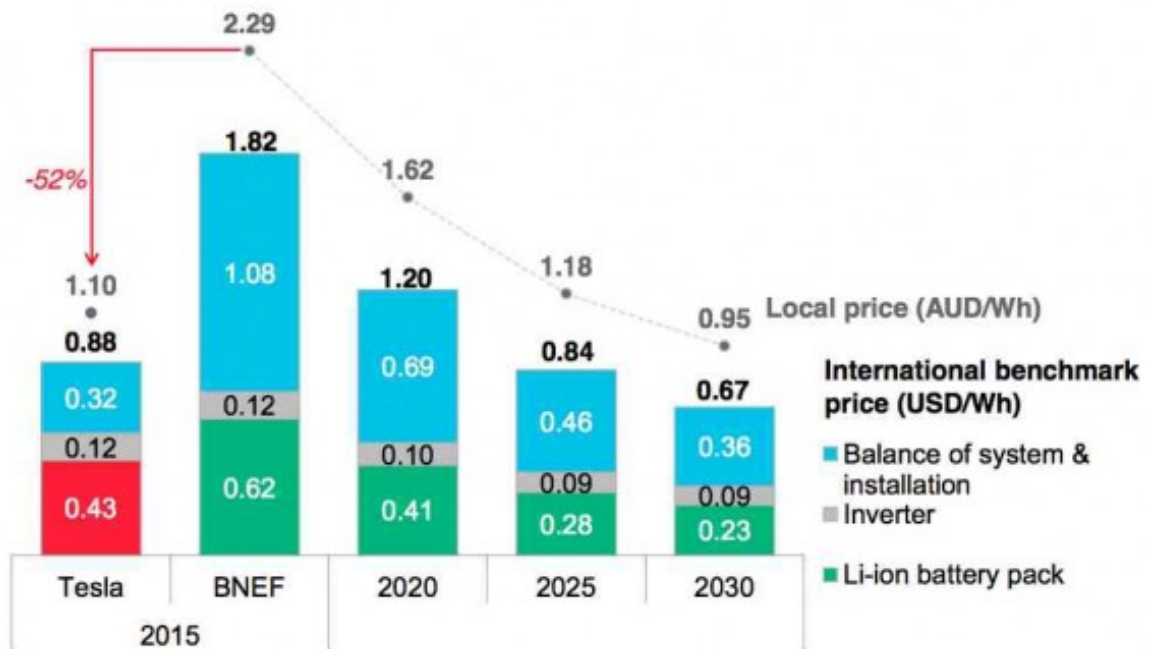
Hugh Bromley, from research firm Bloomberg New Energy Finance, says Tesla has effectively brought forward the pricing of battery storage by anything from 5 to 7 years.

Asian firms can compete with the proposed Tesla battery storage product on price, it's just that they will likely have to forgo their planned recouping of R&D expenses in the next few years.

This graph below illustrates how the Tesla pricing has changed the pricing estimates of battery storage. On the left is the Tesla battery system, plus inverter costs and balance of system and installation costs.

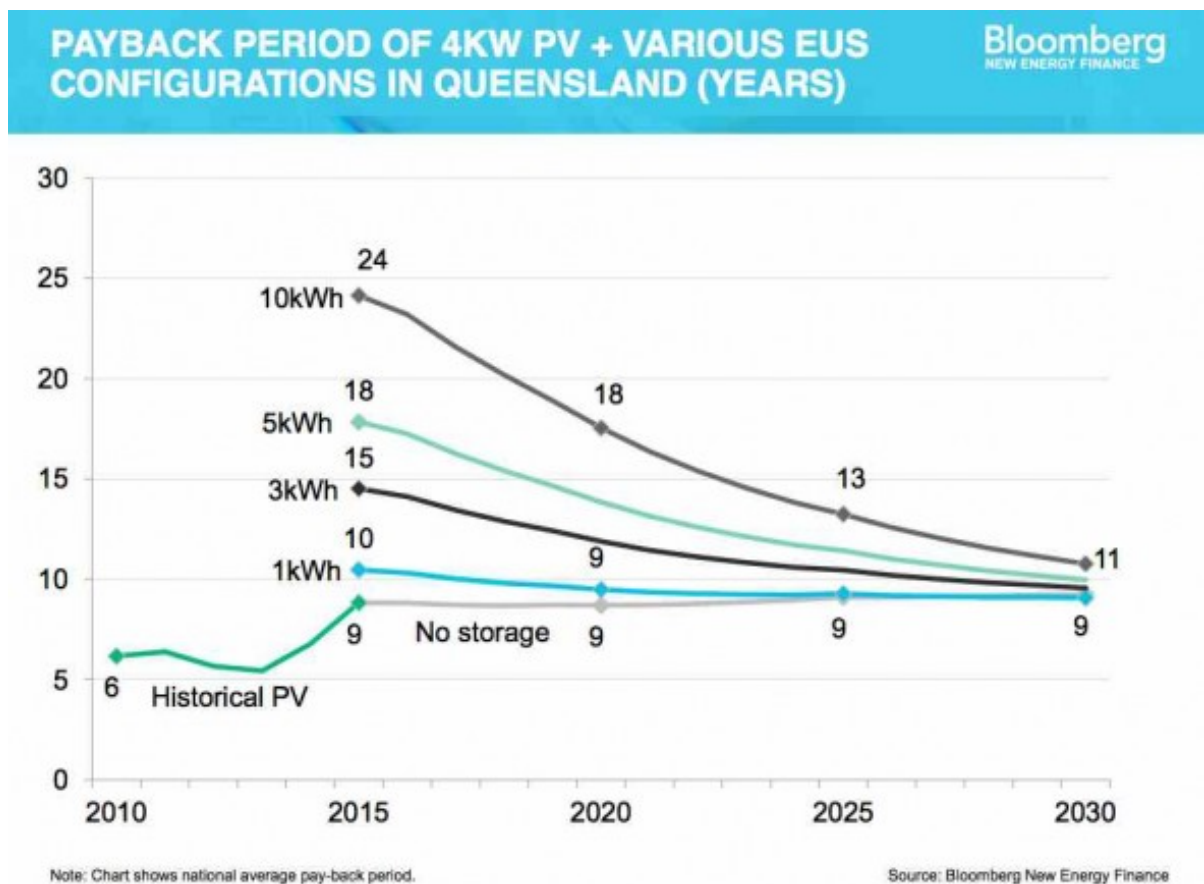
Immediately to the right is the result of BNEF's pre-Tesla price check (in US and Australian dollars), and further to the right is its (pre-Tesla) pricing estimates for the next five-year blocks.

Basically, BNEF says Tesla has effected a price cut of around 50 per cent in \$A terms. For the other manufacturers to match that, they will have to sacrifice attempts to get "R&D payback" in the first years of deployment. Like companies associated with Tesla founder Elon Musk companies, be it with Tesla or Solar City, they will have to play the long game and look to get their R&D payback over time via the mass market.



The payback period for consumers, illustrated below, is interesting because, although it should be noted that this is based on “pre-Tesla” pricing, it’s also important to note that it is an average, and will depend on other factors such as the size of export tariffs.

Other estimates have pointed to payback period as low as six years in some states, depending on the tariff and battery size. But that accounts for post-Tesla pricing. This graph does underline the point that the bigger the battery storage installed, the longer the payback period, although the difference is virtually obscured by 2030.



This last graph is interesting to note because it puts the Australian market in some global context. While Australia is considered to be one of the key markets in the world, it is not because of its size, but because its growth is likely to be “organic” and not subsidised – although tariff structures will have an influence.

In fact, Australia does not even rate in the top 10 battery storage countries in the world by volume, by 2020, based on this. Mostly this is because other countries have created specific targets and incentives to accelerate the roll-out of battery storage, particularly those with high renewable energy penetrations.

According to BNEF, Australia is likely to have around 104MW of capacity, or 256MWh, of battery storage by 2020. This is expected to be split evenly between behind-the-meter users such as households and businesses, and “end-users” such as network operators.

