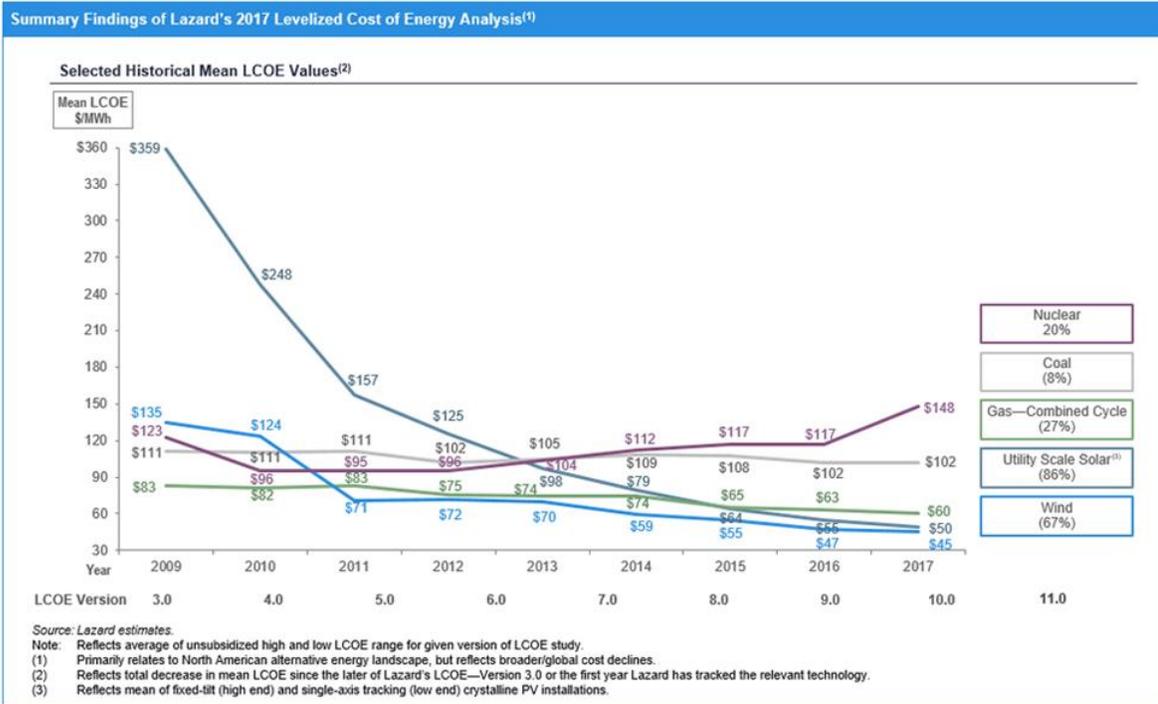


Solar and Wind Now the Cheapest Power Source

November 19, 2018 Kelvin Ross, Editor, Bloomberg New Energy Finance

Unsubsidized solar and onshore wind are now the cheapest source of new bulk power in all major economies except Japan **thanks to falling technology costs**. That's the findings of a new report by Bloomberg New Energy Finance, which examines the levelized cost of electricity (LCOE) worldwide of different power generating and energy storage technologies, excluding subsidies.



The report out today says that **solar and/or onshore wind are now the economic generation source of choice**, even in China and India “*where not long ago, coal was king. In India, best-in-class solar and wind plants are now half the cost of new coal plants.*”

The study notes that the utility-scale solar PV market in China has contracted by more than a third in 2018 because of policy revisions in that

country. **“This in turn has created a global wave of cheap equipment that has driven the benchmark global levelized cost of new PV (non-tracking) down to \$60/MWh in the second half of this year – a 13 per cent drop from the first half.”**

BNEF's benchmark global levelized cost for onshore wind sits at \$52/MWh, down 6 per cent from its LCOE analysis in the first half of this year. **“This is on the back of cheaper turbines and a stronger US dollar,”** the report explains. **“Onshore wind is now as cheap as \$27/MWh in India and Texas, without subsidy.”**

It adds that **“in most locations in the US today, wind outcompetes combined cycle gas plants supplied by cheap shale gas as a source of new bulk generation. If the gas price rises above \$3/MMBtu, our analysis suggests that new and existing CCGT are going to run the risk of becoming rapidly undercut by new solar and wind. This means fewer run-hours and a stronger case for flexible technologies such as gas peaker plants and batteries that do well at lower utilization.”**

The report finds that in the Asia-Pacific, more expensive gas imports mean that new-build combined-cycle gas plants with a levelized cost of \$70-117/MWh continue to be less competitive than new coal-fired power at \$59-81/MWh. **“This remains a major hurdle for reducing the carbon intensity of electricity generation in this part of the world,”** it notes.

In terms of energy storage, BNEF states that short-duration batteries are now the cheapest source of new fast-response and peaking capacity in all major economies except the US, “where cheap gas gives peaker gas plants an edge”.

As electric vehicle manufacturing ramps-up, battery costs are set to drop another 66% by 2030, according to BNEF's analysis. This, in turn, means cheaper battery storage for the power sector, lowering the cost of peak power and flexible capacity to levels never reached before by conventional fossil-fuel peaking plants.

The report highlights that batteries co-located with PV or wind are becoming more common and the analysis suggests that new-build solar and wind paired with four-hour battery storage systems “can already be cost competitive, without subsidy, as a source of dispatchable generation compared with new coal and new gas plants in Australia and India”.