Tesla battery races to save Australia grid from coal plant crash – injecting 7MW in milliseconds

John Fitzgerald Weaver

Tesla's world record sized 100MW/129MWh lithium ion battery reacted within milliseconds when an Australia coal power plant removed itself from the power grid last Thursday. Technically, the Tesla battery responded to the trip event, and finished its work, before the coal plant's backup plant finished its start up process.

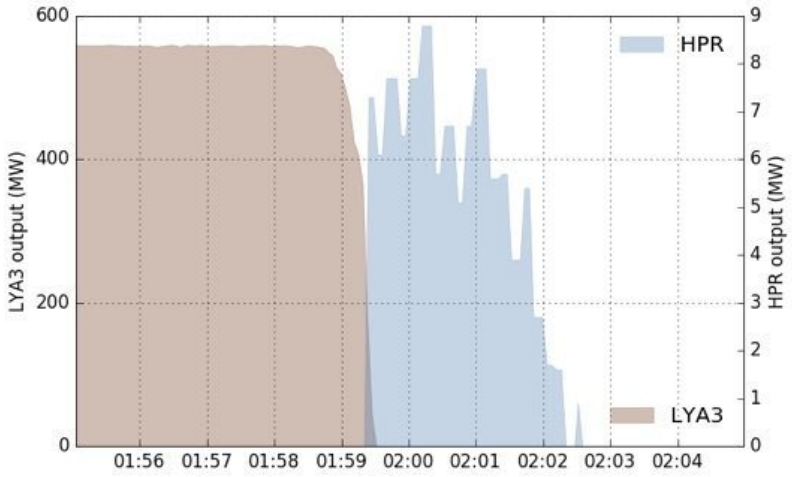
The purpose of this battery was specifically to defend the power grid from trips like this after outages in the summer of 2016.

On Thursday, December 14th at 1.59 AM the Loy Yang A 3 coal unit located in Victoria, Australia tripped. The plant was supplying 560MW of electrical

output at the moment. The unit is more than 621 miles away from the Tesla battery.

No one is suggesting the grid was in danger of broader issues as other backup units came online as planned.

When the Victoria power plant tripped (removed itself from the power grid for a technical reason), the power grid's frequency began to drop – from 50Hz to below 49.80Hz. The battery responded before – as can be seen in the inspecting areas below – the original power plant completed its disconnection from the grid.



According to the RenewEconomy, the data of the Tesla battery's response was faster than the Australian Market Energy Operator (AEMO) data collection hardware could record.

The Hornsdale Power Reserve, as the battery is known, is located nearby the Hornsdale Wind Farm in South Australia. Both units are owned and operated by Neoen.

The Tesla unit came online officially on December 1st. The day before, while testing itself, the unit showed off its fast reaction ability by switching from

charging off of the grid to delivering electricity to the grid, at least 14 times within a 4 hour period.

Electrek's Take

This is exactly what this battery is supposed to do. And this is yet another reason why peaker power plants run by fossil fuels are going down.

The Tesla power plant did two amazing things.

First, the power plant responded to the grid frequency challenge before the offending coal plant actually finished tripping itself from the power grid. That's not like telling the future, but it's so fast you'd start questioning things.

And secondly, it finished its work of stabilizing the grid and shut back down before the regular backup plant even started its work. Because of the slower nature of fossil fuels generator, literally spinning up a massive turbine, they're designed to deliver far more energy than is needed to the power grid. As a form of insurance.

Digital power sources, like a battery system that can send out exactly how much electricity is needed, can use far fewer resources to get the certain grid stabilizing results.

This makes our grid more stable, and in the long run, it'll save significant amounts of money.

Considering residential solar? Understand Solar will connect you with local contractors, or allow me to give you a professional residential consultation.

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