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## Neoen's Hornsdale Power Reserve exceeds all benchmarks after first year in operation

- The independent leading expert Aurecon estimates that the battery allows annual savings in the wholesale market approaching \$40 million by increased competition and removal of 35 MW local FCAS constraint
- The HPR has responded thousands of times to frequency outside the normal operating band, out of those about one hundred were serious
- HPR stabilised the South Australia grid during a massive transmission failure that caused localised blackouts in other states

Neoen (ISIN Code: FR0011675362, ticker: NEOEN), one of the fastest-growing leading independent producers of exclusively renewable energy worldwide, has revealed that its Hornsdale Power Reserve (HPR) has exceeded all performance and market expectations after just one year in operation, according to a new independent report.

Located near Jamestown, South Australia, HPR, the world's largest lithium-ion battery energy storage system is owned and operated by Neoen, with the support of the supplier Tesla. The initiative of this 100 MW lithium-ion battery energy storage was driven by the South Australian Government to stabilise the electricity grid, facilitate integration of renewable energy in the state and avoid load-shedding (i.e. blackout) events.

The fully operational site has a discharge capacity of 100 MW and energy storage capacity of 129 MWh. and shares the same 275 kV network connection point as the 317 MW Hornsdale windfarm.

A report by global engineering and infrastructure advisory company **Aurecon** has outlined the HPR's achievements in meeting these key objectives. It also recognises the HPR as a core element of South Australia's pioneering renewable energy initiative, paving the way for new battery projects across the country.

**Aurecon's energy leader, Paul Gleeson**, said: "reviewing the data from Hornsdale Power Reserve's first year of operation has given us real insights into the capabilities of this new technology, including how these fast response systems can help improve stability, reduce the likelihood of load-shedding events, and contribute to the reduction in wholesale prices. The data is telling us that these fast response systems can help us optimise the way Australian's energy system works".

The key findings from the report are that the Hornsdale Power Reserve:

- Has contributed to the removal of the requirement for a 35 MW local Frequency Control Ancillary Service (FCAS), saving nearly \$40 million per year in typical annual costs
- Has reduced the South Australian regulation FCAS price by 75% while also providing these services for other regions
- Provides a premium contingency service with response time of less than 100 milliseconds
- Helps protect South Australia from being separated from the National Electricity Market
- Is key to the Australian Energy Market Operator's (AEMO) and ElectraNet's System Integrity Protection Scheme (SIPS) which protects the SA-VIC Heywood Interconnector from overload

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The HPR has responded thousands of times to frequency outside the normal operating band. Around one hundred of those events were serious, such as the trip of a large coal plant and one critical event in which two transmission lines were lost. South Australia, although cut off from the grid, didn't lose power as HPR provided frequency support to steady the grid.

**Franck Woitiez, Managing Director Neoen Australia**, added: "the success of Neoen's Hornsdale Power Reserve has strengthened the commercial case for new battery projects in Australia. It enables their deployment to support the ongoing energy transition and will continue to prove the value of similar investments. Hornsdale Power Reserve is an example of the projects that will underpin a modern energy system in Australia and Neoen is excited to continue leading this sector."

**Gleeson concluded:** "this is definitely an exciting project as a world first, but what is really exciting is the impact the technology can have on the whole National Electricity Market as our generation fleet continues its transition".

The full report is available to download here: [www.aurecongroup.com/hpr-impact-study](http://www.aurecongroup.com/hpr-impact-study)

## About Neoen

Founded in 2008, Neoen is France's leading and one of the world's most dynamic independent producers (IPP) of renewable energy. With a current capacity of more than 2 GW already in operation or under construction, and a further 1 GW of projects formally awarded and secured, Neoen has doubled its size in over just 24 months. Neoen is active in France, Australia, El Salvador, Zambia, Jamaica, Portugal, Mexico, Mozambique, Finland and Argentina and has assets in more than 15 countries. It operates Europe's most powerful solar PV farm (300 MW in Cestas, France) and the world's largest lithium-ion power reserve in Hornsdale, Australia (100 MW/129 MWh storage capacity). At the end of 2017, Neoen won one of the largest (375 MW) and the most competitive solar project in Mexico. Neoen is targeting 5 GW capacity in operation and under construction by 2021. Neoen (ISIN Code: FR0011675362, ticker: NEOEN) is listed since October 2018 on the Compartiment A of the regulated market of Euronext Paris.

For more information: [www.neoen.com](http://www.neoen.com)

## About Aurecon

Aurecon is an engineering and infrastructure advisory company, but not as you know it. We've reimagined engineering. Our clients' ideas and aspirations drive all that we do. We work alongside them like no other firm to co-create clever, innovative solutions to some of the world's most complex challenges, adding value across the project lifecycle through deep technical and advisory expertise. We serve our clients across a range of markets, in locations worldwide. Hardwired in our DNA are engineering, design and the deep need to leave a legacy. We are as diverse as we are dynamic. As curious as we are clever.

Drawing on our deep pool of knowledge, we bring vital engineering experience, technical capability and design expertise to the table. Then we listen deeply and intently. We see the opportunities, possibilities and potential that others don't. Through a range of unique creative processes and skills, we collaborate with our clients to re-imagine, shape and design a better future.

We believe humanity depends on engineering; and we recognise we have a broader stewardship role to play. A deep responsibility to hold. As we continually strive for a life in balance, Aurecon clients will be both future ready and engineered for life.

For more information: [www.aurecongroup.com](http://www.aurecongroup.com)

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