

KENNEDY ENERGY PARK

Lead organisation: Windlab, Eurus Energy

Size: 15 MW solar PV, 43.2 MW wind, 2 MW / 4 MWh battery storage

ARENA funding: \$18.0 million

Total project cost: \$160.0 million

CEFC debt finance: \$93.5 million

Location: Kennedy, QLD

The Kennedy Energy Park is a trailblazing project being developed by Windlab and Eurus Energy that will not only provide reliable and affordable power for its local community but demonstrate how to achieve around-the-clock renewable energy.

As the first grid-connected power plant in Australia to combine large-scale solar and wind with battery storage, it will test the technologies working together to see if the plant can provide dispatchable power over a 24-hour period.

The north Queensland location of the Kennedy Energy Park, about 20 kilometres from Hughenden, features one of the best and largest wind resources in Australia, alongside one of the best solar resources. This allows the two energy sources to complement each other, with solar generating electricity during the day and wind producing mainly at night. By storing the electricity in an onsite battery, the combined power plant is able to smooth out any variability, making it possible to provide more continuous generation of electricity.

If the combination of technologies proves to be viable, the project will lay the foundations for a planned second phase, 'Big Kennedy', which would be 20 times the size of the first facility. The success of the first phase will greatly assist with securing capital, debt finance and approvals for the following phase.

LAKELAND SOLAR AND STORAGE PROJECT

Lead organisation: Lakeland Solar & Storage Pty Limited, a subsidiary of Conergy

Size: 10.8 MW solar PV, 1.4 MW / 5.3 MWh battery storage

ARENA funding: \$17.4 million

Total project cost: \$42.5 million

Location: Lakeland, QLD

ARENA is supporting the Lakeland Solar and Storage Project to examine how solar farms with energy storage can help to overcome power reliability problems for electricity users living and working on the fringes of grids.

The developers of the project were the first in the world to combine a large-scale smart controller and battery system with a large-scale solar farm to identify how the technologies can best work together at a fringe-of-grid location.

As part of the project's Knowledge Sharing Program, Lakeland will be separated from the grid and powered solely by solar and battery storage for several hours at a time, essentially becoming an 'island' during test periods. This will demonstrate that the combination of big solar and big battery storage with a smart controller system will not only provide communities with protection from network failures, but also make it possible to supply renewable energy overnight and at peak demand periods.