

Western Australia renewables precinct.



Since the beginning of 2017 APA has developed an additional \$400 million of renewable energy infrastructure in Western Australia to form a \$570 million, 250-megawatt renewables precinct.

Over the next 25 years APA's clean energy initiatives will save over 8.5 million tonnes of greenhouse gases from being released into the atmosphere, and provide energy for over 220,000 Western Australian households annually.

APA will continue to build upon its \$20 billion portfolio of energy infrastructure, which consists of gas pipelines, power stations and renewable energy solutions.

Badgingarra Wind Farm Project Information

The Badgingarra Wind Farm (BWF) is located just to the north of APA's existing 80-megawatt Emu Downs Wind Farm, and the 20-megawatt Emu Downs Solar Farm.

The 130-megawatt wind farm consists of 37 Siemens 3.6-megawatt wind turbines which are connected to the Western Power electricity grid. The wind turbines are installed with a hub height of 85 metres and a tip height of 150 metres.

The potential energy output from Badgingarra Wind Farm is equivalent to the power required for more than 115,000 Western Australian homes. This clean energy initiative will also have the ability to save more than 420,000 tonnes of greenhouse gas emissions annually.

Construction commenced at the end of 2017 and was completed in early 2019.

Badgingarra Solar Farm Project Information

The Badgingarra Solar Farm (BSF) is being constructed adjacent to APA's Emu Downs Wind Farm, across 40 hectares of land on the corner of Bibby Road and Yerramullah Road. The development will be co-located with the Badgingarra Wind Farm.

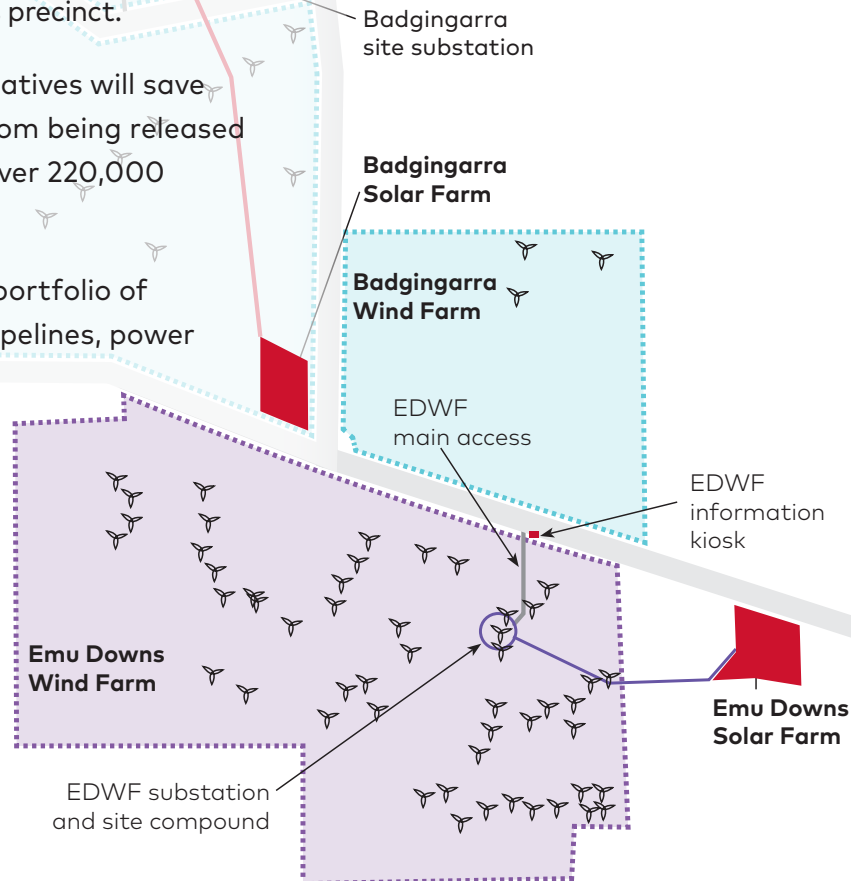
The Badgingarra Solar Farm will consist of almost 62,000 panels, utilising a NEXTracker single axis tracker system, providing a total output of 17.5-megawatts to the Western Power grid.

The potential output of BSF is the equivalent power required for more than 6,000 Western Australian homes, and will have the ability to save 32,900 tonnes of greenhouse emissions annually.

The construction of BSF commenced in early August and is due for completion in the first half of 2019.

Co-located Badgingarra Wind & Solar Farm Information

The \$355 million co-located Badgingarra Wind and Solar Farm development is underpinned by an agreement with Alinta Energy for the purchase of all the energy, and the Large Scale Renewable Generation Certificates generated by BWF and BSF through to December 2035.



Asset	Output (megawatts)	Annual GHG Savings (tonnes)
BWF	130	420,000
BSF	17.5	32,900
EDWF	80	180,000
EDSF	20	35,000

WA renewables factsheet.

Emu Downs Wind Farm Project Information

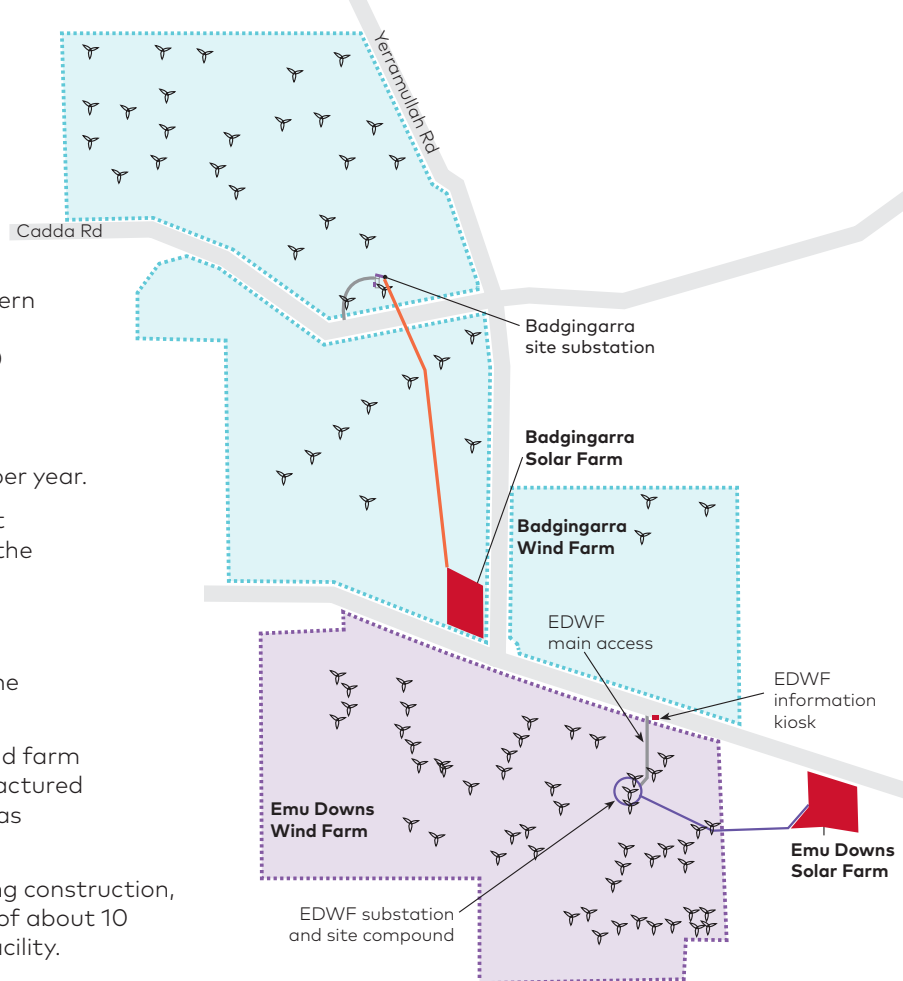
The Emu Downs Wind Farm (EDWF) is one of Western Australia's largest green energy initiatives. Located 30 kilometres east of Cervantes, approximately 200 kilometres north of Perth, Emu Downs generates electricity from 48 wind powered turbines. The wind farm has a capacity to produce 80 megawatts of electricity at peak, and to supply 50,000 homes per year.

The wind farm consists of 48 Vestas 1.65-megawatt V82 wind turbines, a substation, interconnection to the main 132-kilovolt electricity grid, administration and stores buildings, and a network of access roads.

Construction of the \$180 million Emu Downs Wind Farm project commenced in November 2005, and the project was commissioned in October 2006.

Emu Downs Wind Farm was the first Australian wind farm to be equipped with state-of-the-art blades manufactured in Australia. The blades were manufactured by Vestas at its newly opened facility in Portland, Victoria.

In addition to the large number of jobs created during construction, Emu Downs Wind Farm has created the equivalent of about 10 full time jobs over the minimum 20 year life of the facility.



Emu Downs Solar Farm Project Information

The Emu Downs Solar Farm (EDSF) is built adjacent to the existing Emu Downs Wind Farm within the Shire of Dandaragan. The solar farm adds 20 megawatts to the existing capacity of the 80-megawatt wind farm.

The solar panels are fitted on a tracking system for optimum solar power collection. The 70-hectare solar farm shares the existing transmission connection infrastructure of the wind farm, with only minor upgrades required to the existing substation.

The solar farm is underpinned by a 13-year power purchase agreement to sell electricity and generation certificates generated by the solar farm to energy provider Synergy through to 2030. \$5.5 million in funding is also being provided by the Australian Renewable Energy Agency (ARENA), from ARENA's competitive Large-scale Solar Funding Program. Construction commenced in April 2017 and was completed in early 2018.

