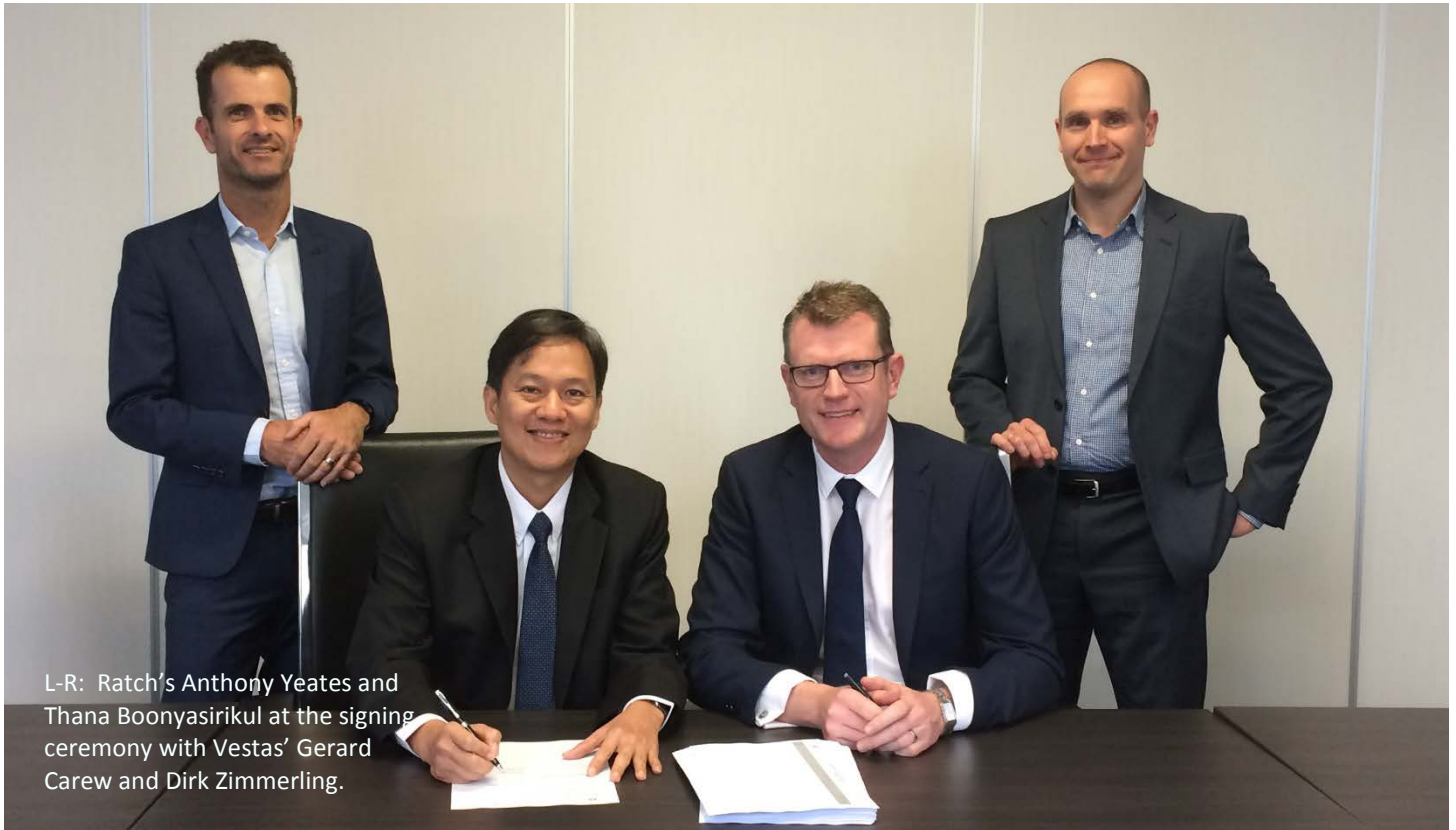


Mount Emerald Wind Farm Update



L-R: Ratch's Anthony Yeates and Thana Boonyasirikul at the signing ceremony with Vestas' Gerard Carew and Dirk Zimmerling.

Mt Emerald Wind Farm reaches financial close

On November 2, Ratch announced the company had reached Financial Close on the 180MW Mount Emerald Wind Farm.

Financial Close is the culmination of a series of major development milestones which include:

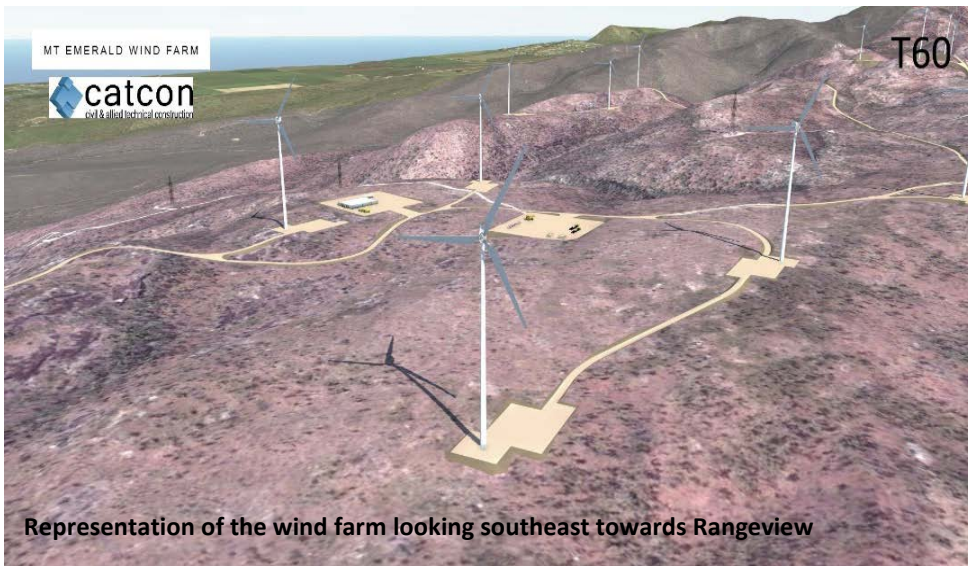
- Signing of the engineering, procurement and construction (EPC) contract with wind turbine supplier Vestas. Vestas will be responsible for construction of the project with major subcontractors Consolidated Power Projects (CPP) and Civil & Allied Technical Construction (Catcon).
- Signing of the long term Warranty and Operations Management Contract with Vestas.
- Signing of the 25-year grid connection agreement with Powerlink Queensland to have the wind farm connected to the national electricity grid.
- Signing of all the financing documents required to raise debt finance for the project. Debt will be provided by ANZ, National Australia Bank, Societe Generale and the Mitsubishi UFJ Financial Group (MUFJ).
- Provision of binding commitments from Ratch to provide 100 percent of the equity.

A team effort pays off

Ratch Business Development Manager, Anthony Yeates, said the process to reach financial close has been busy but worthwhile.

"This has been a huge team effort from many different parties over a long period, and we are proud to be delivering a project which is not only low carbon but which will meaningfully add to North Queensland's energy security," Mr Yeates said.

"The Ratch team would also like to thank all the community, business and government support which has helped us get to this significant milestone."



Representation of the wind farm looking southeast towards Rangeview

At \$380 million, the dollars being invested on the Mount Emerald Wind Farm are significant but there is also nothing modest about the scope and scale of project

There will be 53 wind turbines delivered to the 2,422 hectare development site near Walkamin. Each turbine will have a capacity exceeding 3MW making a total capacity of 180MW to be connected to the electricity grid.

The wind farm will deliver in the order of 540,000 megawatt hours of renewable energy, which is predicted to meet the annual needs of approximately 75,000 north Queensland homes over a 20-year period. It will abate more than 500,000 tonnes of greenhouse gases each year.

The tallest turbine has a 90m tower height and 57m blade length. Each blade weighs 16 tonnes while the heaviest part is the turbine head or nacelle, which is 120 tonnes. Around 500 cubic metres (the equivalent of 80 concrete trucks) will be required for the foundations for each of the towers.

Ratch Business Development Manager, Mr Anthony Yeates said no stone had been left unturned to deliver a project that the region could be proud of.

“We’re confident we will deliver a world class wind farm project that will serve as a global benchmark,” Mr Yeates said.

Transport to Site



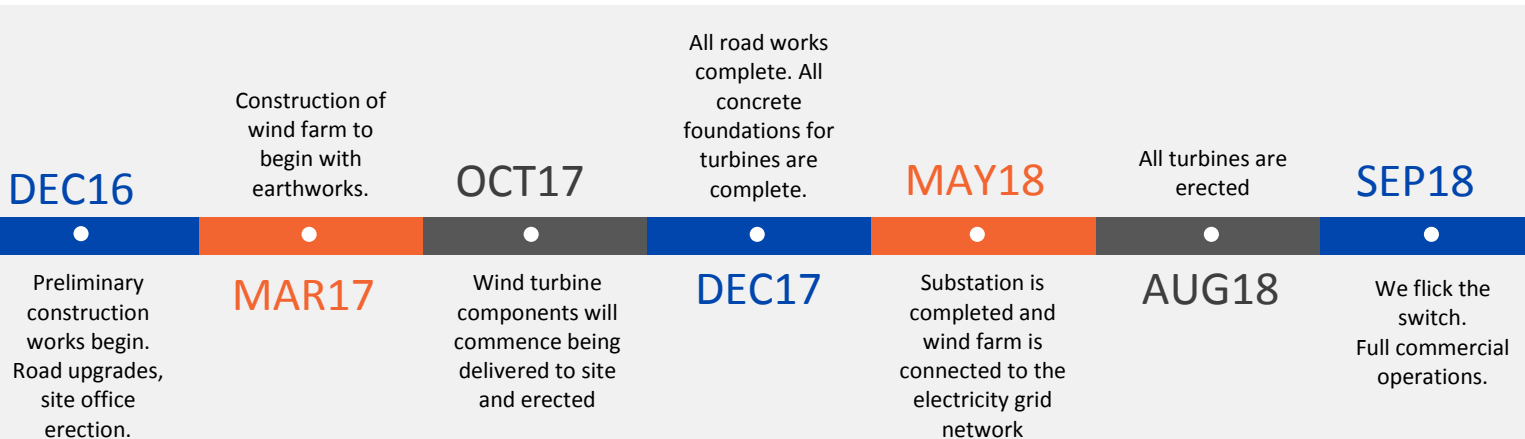
Transporting wind farm components from the port to the site is a carefully considered science.

Each turbine is broken into smaller, more manageable parts - towers in 3 or 4 sections, the nacelle (or turbine head), hub and individual blades.

Pieces will be transported by truck, using standard axle loads. The delivery route to site is yet to be fully finalised, but it is anticipated trucks will head south from Cairns and use the Palmerston and Kennedy Highways to get to Walkamin, before using Hansen and Springmount Roads to get to site.

All parts will be delivered with the approval from the Department of Transport and Main Roads for oversize loads.

Wind turbine components are expected to begin being delivered to site in October 2017.





Ask Anthony

Project Q&As with Ratch Executive General Manager, Business Development, Anthony Yeates.

Send your questions to info@mtemeraldwindfarm.com.au

What MW is each turbine?

The site will comprise 37 x V117 turbines each with a capacity of 3.45MW and 16 x V112 turbines at 3.3MW each, for an overall total of 180.5MW.

Will the taller turbine towers and longer blades be used at lower wind speed sites, or higher wind speed sites? What about in the plateau?

While a key factor, it is not just wind speed which determines the suitability of each site. A range of points are checked to ensure a turbine is suitable for its particular location. Other factors such as; the interaction with other turbines, wind flow angles, and local land form are all checked before a selection is made. Typically, the shorter blades are required for the more robust locations. The majority of these turbines are located along the western side of the site.

The state's approval was for 63 turbines and 53 turbines are now proposed, from which part of the site will most of these 10 turbines be removed?

The turbines removed from the DA approved 63 WTG layout are those numbered – 14, 23, 24, 25, 26, 27, 28, 61, 68 and 70. Seven of these are from the central part of the site and three are from the north east of the site.

What warranty is offered on the wind turbines?

The turbines will be operated and maintained under a Warranty and Operations Management (WOM) Contract. The contract term is for 10 years with an option for a further 5 years. This contract contains specific clauses which cover performance factors such as time in operations, noise and generation output.

How often is maintenance required?

Just like a car the turbines will required regular servicing or scheduled maintenance and unscheduled maintenance to deal with faults. Scheduled maintenance is to occur in-line with the specified maintenance program, typically conducted at 6 monthly intervals.

Will maintenance technicians be locally based, or come from elsewhere?

Given the nature of the maintenance requirements the team would be locally based. There may be a need to bring external experts in at times for select activities or training purposes, but essentially teams will be on-site during standard working hours and rostered on-call outside of these times.

Introducing our head contractors

Vestas will be responsible for construction of the project with major subcontractors Consolidated Power Projects (CPP) and Civil & Allied Technical Construction (Catcon).

Who is Vestas?

Vestas has installed more than 50,000 turbines in 75 countries and has considerable experience in all the key disciplines – engineering, transportation, construction and operations and maintenance.

www.vestas.com

Who is CPP?

CPP is an Australian electrical engineering company specialising in providing full turnkey high-voltage solutions for power utility, industrial & resource, rail and renewable energy sectors.

www.conpower.com.au

Who is Catcon?

Catcon is a civil engineering construction company with extensive experience in the delivery and project management of major power, mining, water and general infrastructure projects.

www.catcon.com.au

Ratch is answering Australia's call for cleaner energy.

For more information

Please visit
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