Liverpool Range Wind Farm

Newsletter Edition
11
June 2023

The Liverpool Range Wind Farm will reduce Australia's carbon footprint by approximately 2.5 million tonnes every year while supplying enough power for up to 570,000 dwellings across NSW. With more clean, renewable energy powering the state, the Project will help reduce Australia's carbon footprint and drive down the cost of electricity while bringing jobs and economic development to the region.

Based on submissions that were received during the September-October 2022 public exhibition period and the ongoing consultation since then, we have made a number of demonstrable changes to the Project. These changes are described and assessed in the Response to Submissions (RTS) Report, the Amendment Report and the updated environmental impact assessments. These reports contain information about how the RTS Project is different from the Approved Project, and how these changes would affect the environment and how they can be managed.

We are aiming to lodge the reports and detailed assessments with the Department of Planning and Environment (DPE) in mid-2023. DPE will assess and make a determination on the application.

We have now updated all available Project information on our website and in the Coolah shopfront. We have prepared supporting project information material, such as large-scale maps and photomontages, and updated environmental impact assessment fact sheets, which distil technical detail from the assessment to pull out the key changes, impacts and mitigation measures.

This newsletter covers:

- Changes to the Project
- Project layout maps
- Transmission line information
- Field update
- Project benefits
- Community update
- Next steps

STAY UP TO DATE

To view the Project online and to subscribe to the newsletter, visit: www.liverpoolrangewindfarm.com.au

Modification Application

In September 2022, the Modification Application was submitted to DPE for the Liverpool Range Wind Farm (Mod-1 Project). In response to submissions received during the public exhibition period, we have made several changes to the Project, referred to as the RTS Project.

The key changes proposed by the RTS Project are:

- Further reduction in the number of proposed wind turbines from 220 to 185.
- Reduction in the maximum blade tip height from 250 m to 215 m above ground level (AGL).
- We have now selected the Vestas V172 7.2 MW turbine, which has a blade length of 85 m. This equates to a rotor diameter of 172 m. We had previously assumed a rotor diameter of approximately 210 m.
- Removed five turbines that were proposed by the Mod-1 Project in the northeast of the site near Coolah Tops National Park, to minimise visibility from Pinnacle Lookout and reduce potential noise impacts within the National Park.
- Amendment to the External Transmission Line alignment to completely avoid a portion of Durridgere State Conservation Area, near Turill.
- Shifted three turbines (D40, D43 and E31) to avoid impacts to a communications link proposed by the NSW Telecommunications Authority (NSW Telco).
- Removed optional locations for various infrastructure, such as duplicate access track site entrances and associated access track alignments, and substation locations.

We have completed substantial design optimisation work and constructability assessments to progress the Project towards construction. We are aiming to commence construction in 2024 and be fully operational by 2028, to help meet the State's energy supply needs as more coal-fired power stations are scheduled to be decommissioned over the coming years.

Hover over the QR code to explore the interactive map of the RTS Project.

What are the key changes?

The key changes to the Approved Project proposed by the RTS Project are outlined in the table below. The changes previously proposed by the Mod-1 Project that was submitted in 2022 are also outlined in the table below for comparison purposes.

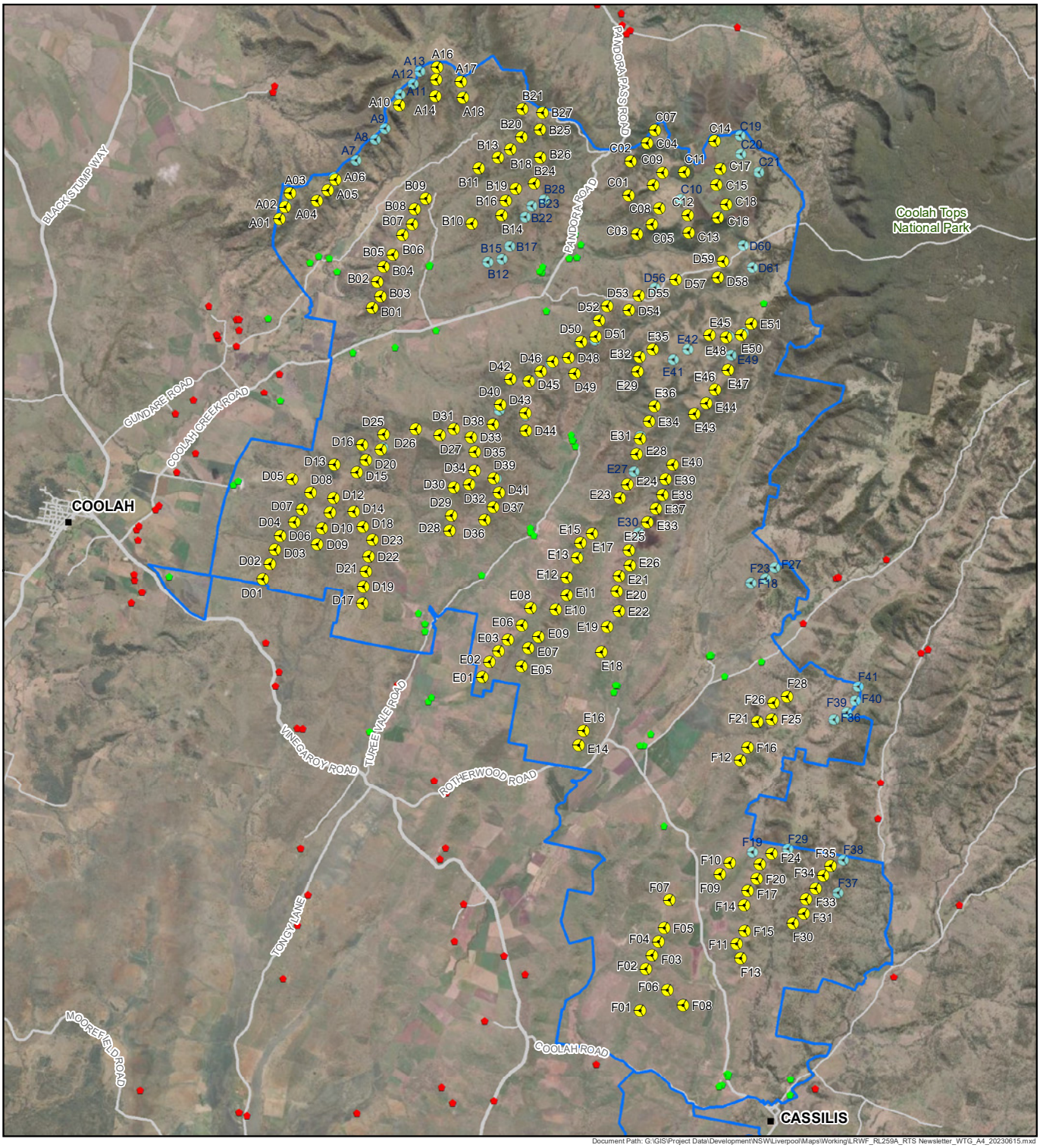
Project component	Approved Project (2018)	Mod-1 Project (2022)	RTS Project (2023)	Change: Approved Project vs RTS Project
Max. number of turbines	267	220	185	-82 (-31%)
Max. turbine height	165 m	Up to 250 m	215 m	+50 m (+30%)
Operations and maintenance buildings	Up to 1	Up to 3	No change from Mod-1 Project	+2
Collector substations	Up to 4	Up to 7	Up to 6	+2
Connection substations	1	1	1	No change
Over-size/over-mass Haulage	Preferred route identified	Minor change to the use of State roads. Inclusion of specific Local roads within Muswellbrook LGA	Edderton Road bypass route option near Denman Bridge has been removed	Avoid built-up areas in Maitland and low height clearance bridge at Denman
Internal Transmission Line Length	28.2 km	43.9 km	41.7km	+13.5 km
Concrete Batch Plants	Up to 4	Up to 10 – 9 within Wind Farm and 1 along External Transmission Line near Turill	No change from Mod-1 Project	+6
Construction Compounds and Laydown Areas	6	Up to 10 – 9 within Wind Farm and 1 along External Transmission Line near Turill	No change from Mod-1 Project	+4
Permanent Met Masts	Up to 10 at hub height	Up to 14 at hub height	Up to 11 at hub height	+1

What are the benefits for the environment?

The RTS Project would generate more renewable energy and lower greenhouse gas emissions by 2.5 million tonnes every year, the same as taking more than 800,000 cars off the road.

Project component	Approved Project (2018)	Mod-1 Project (2022)	RTS Project (2023)	Change: Approved Project vs RTS Project
Generation capacity MW	Approx. 962 MW	Approx. 1,320 MW	Approx. 1,332 MW	38% increase
Households powered per year	Approx. 477,000 households	Approx. 662,000 households	Approx. 570,000 households	185,000 more households
Greenhouse gas reduction per year	Approx. 2.1 million tonnes of CO2	Approx. 2.9 million tonnes of CO2	Approx 2.5 million tonnes of CO2	400,000 tonnes of additional reductions in CO2 emissions
Equivalent number of cars	Approx. 672,000 cars off the road	Approx. 933,000 cars off the road	Approx. 814,000 cars off the road	142,000 more cars off the road

Figure 1: RTS Project Turbine Layout - Comparison with Mod-1 Project



RTS Project (2023)

- RTS Indicative Turbine Layout (185 WTG)
- RTS Site Boundary

Dwellings

- Associated Dwellings
- Non-Associated Dwellings

Mod-1 Project (2022)

- Mod-1 Turbine Layout (220 WTG)

N

Date: 15/06/2023
Version: B

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Kilometers

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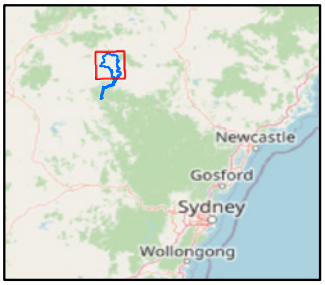
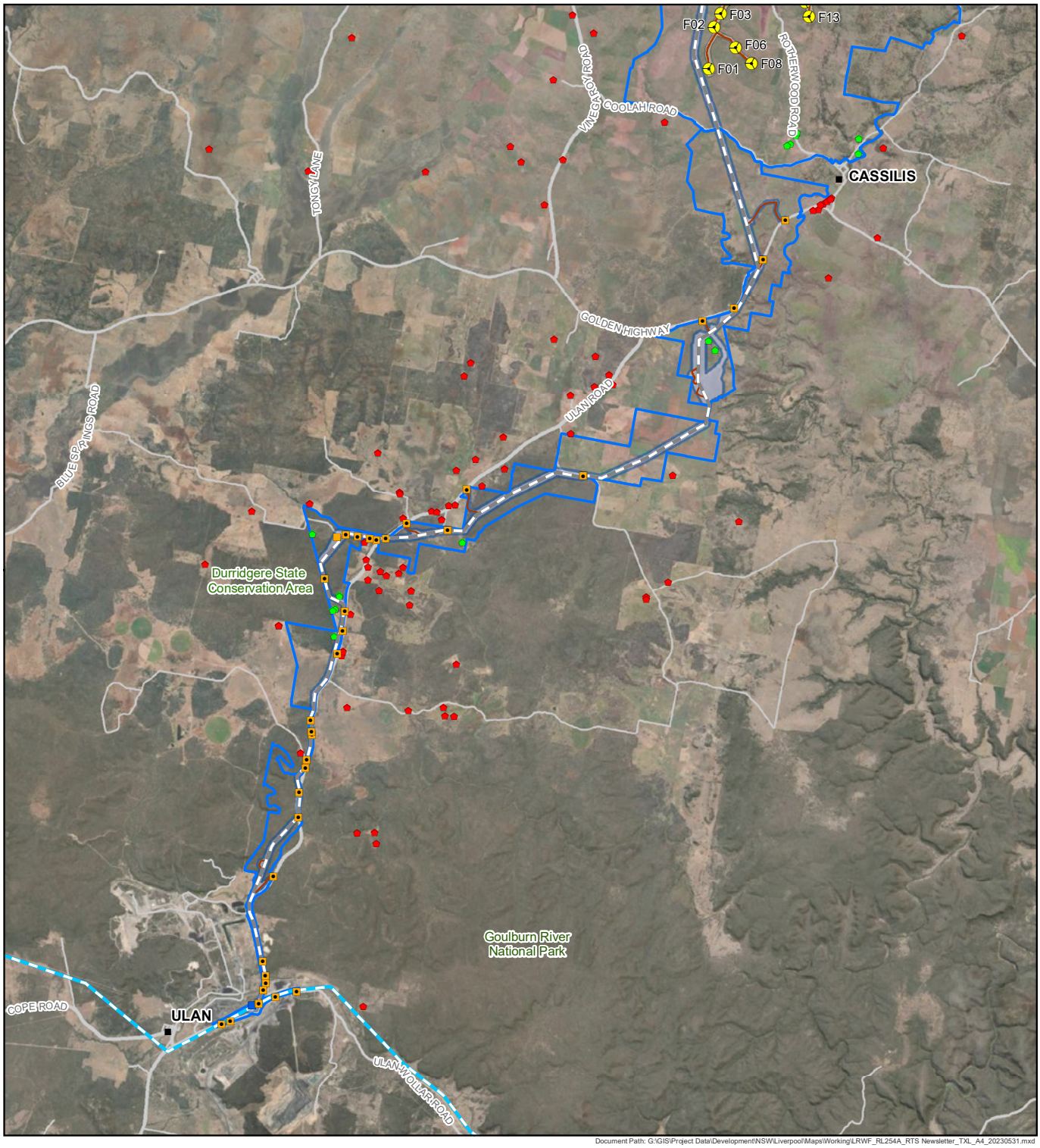


Figure 2: External Transmission Line (RTS Project)



Legend

- RTS Site Boundary
- RTS Development Corridor
- RTS Development Corridor - External Transmission Line
- Indicative Turbine Layout
- Site Access Points
- Potential Switchyard Location
- Potential Construction Compound / Laydown Area / Batch Plant
- Potential O&M Facility
- Potential Substation
- Access Track
- Internal Transmission Line (Indicative 330kV)
- External Transmission Line (Indicative 330kV)
- Transgrid Transmission Line (330 kV)

Dwellings

- Associated Dwellings
- Non-Associated Dwellings

N

Date: 30/05/2023
Version: A

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Kilometers

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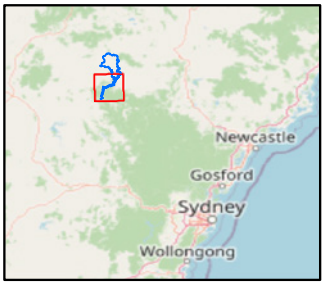

What assessments were updated for the RTS Project?

The table below outlines the assessments undertaken for the RTS Project and the key changes to impacts and mitigation. Note, this table also refers to two types of residences:

- **Associated residences**: host landholders, landholders providing access during construction or operation and other landholders with a financial or in-kind agreement with the Project
- **Non-associated residences**: owners or occupiers who do not have a financial or in-kind agreement with the Project

Individual fact sheets have been prepared for each of these specialist assessments. The detailed assessments are included as part of the Amendment Report that has been prepared for the RTS Project.

Specialist Assessment Type	Change in impact RTS Project vs Approved Project	Changed mitigation	Changes to development consent
Aboriginal Cultural Heritage	Additional Aboriginal cultural heritage values identified but similar level of impact as the Approved Project.	No	Yes
Aviation	Two Aircraft Landing Areas (unregulated/uncertified landing areas) will possibly be affected by the RTS Project, however the Aviation Impact Assessment confirms that these ALAs can remain operational.	Yes	No
Biodiversity (Bird and Bat)	Increased number of bird and bat species at risk of blade strike but overall impact of blade strike and barotrauma would be consistent with the Approved Project.	No	No
Biodiversity (Vegetation)	Increased impact to native vegetation and species habitat. Requires increase to clearance limit specified in Development Consent granted for the Approved Project in 2018. The increase is due in main part to more accurate and detailed 3D design of all wind farm infrastructure, application of the Biodiversity Assessment Method (BAM), and the inclusion of impacts associated with public road upgrades (which were not assessed for the Approved Project).	No	Yes
Electromagnetic Interference	Potential for interference with Bureau of Meteorology's (BOM) Namoi weather radar and one nearby land mobile licence. We will continue to consult with the BOM and the affected land owner.	Yes	No
Historic Heritage	No impact on historic heritage expected, consistent with the Approved Project.	No	No
Noise	Predicted noise levels at all Non-associated residences would be within applicable noise limits. Minor increases and decreases in operational turbine noise levels are expected at several Non-associated residences. Two Non-associated residences will experience an increase of 3.2 dB(A) and 3.3 dB(A) which is a change that is described as "just noticeable" to most persons. All other Non-Associated residences will experience an increase between 1 and 2 dB(A), with a 1 dB(A) increase being imperceptible to the human ear. Potential for six Non-associated residences to be considered as 'noise affected' during out-of-hours operation of the concrete batch plant proposed along the external transmission line near Cliffdale Road, Turill. However, in the event the Project connects into the CWO REZ Transmission Line, the RTS Project external transmission line would no longer be required and all associated impacts (including construction noise) would no longer apply.	No	Yes
Public Road Upgrades	A series of public road treatments have been agreed with the relevant councils. Coolah Road near Cassilis is no longer proposed to be used during construction. We are investigating ways to reduce the impact of construction on the community as much as practicable. This could include undertaking concurrent road and wind farm construction works, which could shorten the overall construction timeframe.	Yes	Yes
Shadow Flicker and Blade Glint	No shadow flicker impacts at Non-associated residences and no impact of blade glint.	No	No
Traffic and Transport	Similar level of construction vehicle traffic is expected during the peak construction period. All additional site access points from public roads meet the relevant safe sight distance criteria. Minor changes to indicative turbine haulage route from the Port of Newcastle.	Yes	Yes
Visual Impact	No change in the magnitude of visual impact. Three of the four Non-associated residences within 2,850 m of a turbine have had their visual impact ratings reduced due to intervening vegetation and structures which reduce visibility of turbines. No change in impact rating is recommended for the fourth Non-associated residence. Increased blade tip height would trigger mitigation measures to be offered to all non-associated dwellings within 4,250 m of a turbine.	Yes	Yes

Transmission Line information: EnergyCo and the Central-West Orana Renewable Energy Zone (CWO REZ)

EnergyCo is coordinating the delivery of the CWO REZ, and developing the CWO REZ Transmission Line project, which includes a 330 kV transmission line between Merotherie Energy Hub and the Liverpool Range Wind Farm project. EnergyCo's proposed transmission line corridor can be viewed here: https://caportal.com.au/energyco/rez

EnergyCo and its delivery partners are responsible for all required approvals and for the construction and operation of the CWO REZ Transmission Line. At present EnergyCo expects that the Environmental Impact Statement for the CWO REZ Transmission Line (and other transmission infrastructure) will be submitted in late 2023.

EnergyCo has advised that it is proposing to adopt poles where practicable along an approximately 29 km section of the CWO REZ transmission line between the Liverpool Range Wind Farm point of connection (located off Rotherwood Road, Cassilis) to the Durridgere State Conservation Area (located off Ulan Road). EnergyCo note that at high load locations, such as change in directions and significantly undulating terrain, poles may not be practicable.

EnergyCo has advised that poles are proposed to be adopted where the land agreements previously made between Tilt Renewables and landowners explicitly state that poles would be utilised. Tilt Renewables has agreed to pay the additional costs associated with the construction of additional pole structures along this section of the CWO REZ transmission line. This is a fantastic outcome that is built on substantial effort and genuine goodwill between affected landholders, EnergyCo and Tilt Renewables.

While we are working closely with EnergyCo to pursue this connection option, to ensure that the Project has an approved grid connection in circumstances where delivery timeframes for the Project and the CWO REZ Transmission Line project do not align, the RTS Project includes the external transmission line. Accordingly, all potential impacts associated with the entire length of the transmission line down to Ulan have been assessed in RTS Project documentation. In the event that the Project connects into the CWO REZ Transmission Line, the external transmission line connection down to Ulan (proposed by the RTS Project) would no longer be required and all associated impacts would no longer apply.

EnergyCo in the field – Mudgee Small Farm Field Days

Location: Australian Rural Education Centre, 267 Ulan Road, Bombira NSW 2850

When: Friday 7 and Saturday 8 July, 8.30am to 4pm

Field Update

Over the past six months we have had a number of consultants out at the wind farm site to update their studies as part of the RTS phase and to inform the latest wind farm design. These include geotechnical investigations, road and boundary surveys, updated Lidar data, and further ecological and cultural heritage surveys. Investigations are also underway to identify and obtain approvals for onsite quarries and water supply to be used during the construction period of the Project.

ARDG Liverpool Range Quarries Project

Newcastle-based Australian Resource Development Group (ARDG) has partnered with local landowners and is working to determine the feasibility of developing on-site quarries to supply all of the construction material requirements for the Project. At the completion of wind farm construction, the quarries would be closed and rehabilitated.

On-site quarries would remove over 70,000 truck movements from the local road network during the construction period, bringing benefits to the local community via improved road safety and reduction in damage to the local road network. On-site quarries would also generate significant cost savings to the Project by eliminating the cartage component of construction materials supplied to the Project.

ARDG operates independently of wind farm proponents to develop quarry product supply strategies that deliver numerous benefits to both projects and their surrounding communities.

For more information, please contact:

Justin Meleo, Director – Planning & Development
Australian Resource Development Group Pty Limited

justin@ardg.com.au
0427 180923

Are you a landholder with a vacant house?

We want to hear from you if you have accommodation that could be registered on our accommodation directory for the region. We are hoping to build out a comprehensive view of what's currently available as well as what could be available.
We encourage you to think outside the box!

Get in touch by emailing liverpoolrangewindfarm@tiltrenewables.com or on 1800 WE TILT (938 458).

Project Benefits

We are committed to being a valued and active community member. It is important to us that we demonstrate the benefits a renewable energy project can bring to a region by way of supporting jobs, businesses, community investment and long-term resilience and the environment.

During consultation for the Modification Application, we heard from several stakeholders with concerns about the impact of the Project, and support for the potential benefits the Project will bring. Common concerns raised during consultation relate to the cumulative impact of multiple generation and transmission projects in the region; ongoing disruptions to rural communities' way of life; concerns about the impact of in-coming workforces on existing housing and health services; uncertainty surrounding the scale of changes made to the Project in the Modification Application; and impacts on traffic and road deterioration. We continue to address these concerns in our on-going Project planning and design, and in our management strategies.

Project Benefits

Jobs and business

Construction activities provide an economic boost for regional communities by increasing demand for local goods and services such as construction contracts, accommodation, hotels, hospitality and other services.

The overall economic activity of the Project will create approximately 230 more regional jobs per year during construction and 190 more per year during operation.

The peak construction workforce will be approximately 550 workers, and we estimate there will be approximately 40 ongoing operational jobs.

We acknowledge that there is low unemployment across the Central-West Orana region with many projects and businesses experiencing challenges sourcing staff. We are committed to maximising local employment outcomes by facilitating pathways for local and regional community members and First Nations job seekers to build the required skills and move into available jobs; supporting apprenticeships and training opportunities; encouraging contractors to employ local people first before looking beyond the region; and advertising employment and procurement opportunities widely.

GOODS AND SERVICES REGISTER

To register interest in providing goods or services for the Project, please visit www.liverpoolrangewindfarm.com.au and complete the linked form under the Employment section.

Transport

The RTS Project would upgrade impacted local and regional roads during construction benefiting all road users. The Project would also create additional fire breaks with improved access roads for firefighting.

Regional investment

The Project will inject more than $6 million each year to the local economy through payments to permanent staff, landholders and benefit sharing contributions. These funds, combined with the construction and the operation of the wind farm, will go on to support a further $95.47 million of regional economic activity during construction and $33.8 million every year during operations, further supporting local economic prosperity and resilience.

Tilt Renewables has several existing arrangements in place designed to directly fund infrastructure and initiatives in the region.

Benefit Sharing Plan

We will continue working with the community to spread the benefits of the Project via a Benefit Sharing Plan. This plan will seek to:

- Ensure the immediate communities directly benefit from the presence of the Project
- Contribute towards broader public benefits and economic development that address the needs of the region throughout the lifecycle of the Project
- Build on strategic opportunities to drive local innovation
- Create a legacy beyond the immediate benefits of the Project

We are engaging with EnergyCo, Warrumbungle and Upper Hunter Shire Councils, and relevant community groups to understand how our benefit sharing budget can best be allocated considering the RTS Project, the executed Voluntary Planning Agreement and the requirements of being a project in the CWO REZ.

What we've been up to in the community:

Since opening the Coolah shopfront in February this year we have had the pleasure of participating in a number of events while also supporting community groups and initiatives with funding.

Recently we sponsored and attended the following community events, where we cultivated new relationships with locals, discussed benefit sharing and accommodation, learnt more about key concerns and discussed offset opportunities.

- **Coolah Shopfront opening BBQ** – we held a free barbeque for the community to officially open our project shopfront at 50 Binnia Street Coolah.
- **The Dunedoo Show** – we set up a marquee and provided information about our Project. It was a spectacular sunny day and a great turn out. It was a spectacular sunny day and a great turn out.
- **Coolah Senior Citizens Luncheon** – we supported this event to ensure there was enough funding to make it happen. The Luncheon was a great success, exceeding expectations with 105 seniors attending.
- **Coolah Golf & Bowling Day** – fundraiser for the Coolah Country Education Foundation. We are pleased to say that the day was a great success with over 60 community members attending the event.
- **Cassilis Polocrosse Club** – donation to the club as they hosted the NSW Polocrosse Club Championships this year.

Upcoming events we are supporting:

- **Cassilis Country Music Weekend**
- **Tunes on the Turf 2023**

We have also provided funding for the following community groups to support their operations:

- **Coolah Country Education Foundation**
- **Coolah Dunedoo Landcare**
- **Coolah Black Stump Craft Shop**
- **Coolah Roos Rugby Club**

Industry events we've been present at this year include:

- **Regional Development Orana's Inland Growth Summit – Dubbo**
- **2023 Resources, Energy & Industry Innovation Forum – Dubbo**
- **National Renewables in Agriculture Conference – Dubbo**
- **3rd annual Australian Renewable Energy Zones Conference – Sydney**

How would you like to hear from us?

We work closely with the Coolah Diary to distribute project information as well as direct emails to our stakeholder database. We'd like your feedback on whether there are other channels we could use to share information with you. Please call us on 1800 WE TILT or send us an email with any suggestions.

Photos clockwise from top-left: Tilt Renewables' Nathan Micallef with team mates and community members at the Coolah Golf & Bowls Day fundraiser. Tilt Renewables' Anne-Louise Capel at the Dunedoo Show. Tilt Renewables being awarded a certificate of appreciation by the Coolah Senior Citizens Committee.
The Coolah Senior Citizens Luncheon. The BBQ opening of the Project Shopfront. 1 of 2 air conditioners being installed at the Coolah Black Stump Craft Shop.

Next Steps:

Now that we have selected a preferred turbine (Vestas V172 7.2 MW), we are now in the process of running a tender for the civil and electrical balance of plant (BOP) construction works with Tier 1 companies. We are aiming to identify a preferred BOP contractor in Q4 2023 and aim to run 'meet the contractor' events for local businesses and suppliers shortly thereafter as we ramp up to commence construction in mid-2024.

We are aiming to lodge the Response to Submissions (RTS) report, Amendment Report, and all updated environmental impact assessments with DPE in mid-2023. These reports will detail the consultation completed to-date, how submissions received during public exhibition have been addressed, and will clearly show the changes to the design and layout of the Project. DPE will review the documentation and make a determination on the Modification Application.

We are also seeking Commonwealth approval under a separate approvals process under the *Environment Protection and Biodiversity Conservation Act 1999*. The project will be assessed by way of Public Environment Report (PER) which will be subject to a public exhibition process managed by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW). Further details on the timing of this will be provided via our website and newsletters.

Modification Application Process

Below is an outline of the process that the Modification Application assessment and determination process:

Technical Studies › Consultation on Modification Application › Modification Application › Public Exhibition › Response to Submissions Report (RTS) › **DPE Assessment (we are here)** › Approval /Refusal

To stay up to date on progress of the Project visit:

Modification Application:
www.planningportal.nsw.gov.au/major-projects/projects/mod-1-turbine-and-infrastructure-changes

EPBC Approval:
epbcpublicportal.awe.gov.au/all-referrals/project-referral-summary/?id=dc3fd301-9a6b-ed11-81ac-00224818aa21

GET IN TOUCH

If you have any queries about the Project, the benefit sharing program or possible business and employment opportunities, please do not hesitate to contact us.

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