



# STOCKYARD HILL WIND FARM

Action from the previous District 16 Volunteer Fire Brigades Rural Championships which the Stockyard Hill Wind Farm will again support this year.

Newsletter No.17 | February 2016

Welcome to the 17th edition of the Stockyard Hill newsletter. This newsletter provides information to the communities involved in the Stockyard Hill Wind Farm development.

More copies are available by either contacting us, or downloading from our website.

## Project update

In early 2014 Origin commenced discussions with the community about the possibility of increasing the turbine tip height from 132 to a maximum 165 metres. Since that time we have continued our engagement with turbine manufacturers as part of project development works.

In considering the proposals put forward by turbine manufacturers it has become clear there have been continued advances in turbine technology that would result in improved wind farm performance and output. These improvements may be achieved by installing turbines with an increased overall tip height.

As a result of these assessments, Origin has now determined to seek a Planning Permit Amendment that

would allow a maximum wind turbine tip height of 180 metres (which is the maximum height reached by the turbine blade).

Origin has completed the initial design and environmental & technical assessments for the revised wind turbine dimensions required to accompany an application to amend the Wind Energy Facility planning permit. These assessments result in a reduction of at least 8 wind turbines from the 157 locations approved in the existing planning permit.

The authority responsible for assessing this application is the Victorian Minister for Planning and at this stage, we are working towards submitting a planning permit amendment application in the coming months. Origin will continue

to keep landowners, neighbours and the broader community informed of the progress of this process and will be available to meet and discuss the proposal with any interested parties.

If approved, the amended planning permit would enable the project to generate renewable electricity at a reduced long run average cost and deliver benefits to electricity consumers by using the latest wind turbine technology.



Origin is now seeking a Planning Permit Amendment to increase the turbine tip height to 180 metres.

## EPBC approval timing extended

The project has received a variation to a condition of approval under the *Environment Protection and Biodiversity Conservation Act 1999*, which extended the allowable project commencement date for a further three years. This means the project can commence up until February 2019 without further consent by the Minister for Environment.

## New 100 metre meteorological mast installed

Origin installed another meteorological mast (met masts) in December 2015, adding to the pre-existing six masts that were installed across the site in 2008 and 2012.

The new 'met mast' is 100 metres high, which enables further quantification of the wind resource on the project site at or near the anticipated hub height of turbines now being proposed for the project under the permit amendment.

Met 'masts' are used to measure important meteorological data including wind speed, wind direction, ambient temperature, atmospheric pressure and relative humidity. This data is processed and modeled to determine the long run average wind conditions at the site and how wind speed varies with height above the ground. This information is in turn used to predict how much energy the project will produce, what type of mechanical loading effect the wind will have on the turbines across the blade swept area and also in modelling the noise behaviour of the wind farm.

As the wind conditions can vary with the seasons, collecting wind data at various locations around the project site over a number of years is important to the project to add certainty to our modeling forecasts. The Stockyard Hill Wind Farm project team used the collected data to undertake new calculations and modelling of the project to further refine our appreciation of how the latest wind turbines available on the market will perform compared to those previously considered for the site.

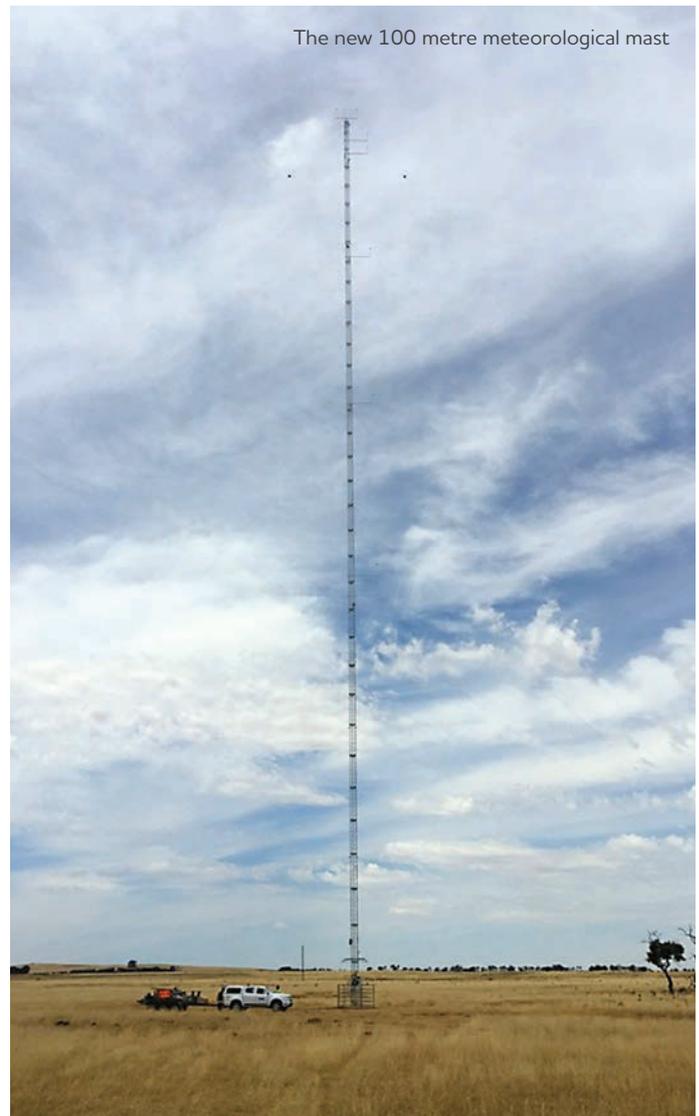
## Community investment

Origin seeks to support local programs and organisations which contribute to one or more of the following:

- Skills, education and training
- Community safety, health and wellbeing
- Sustainable population growth
- Natural resource stewardship
- Community events and activities that promote and enhance community connection

In recent months, Origin has provided support to the following local groups:

- Trawalla Primary school – to enable purchase of new educational materials
- Skipton Progress Association – to help with the delivery of the Association's annual Christmas event.
- District 16 Volunteers Fire Brigades Victoria Rural Championships – to help the Committee manage the championships locally.



Further information on the community investment program and how to apply can be viewed at [www.stockyardhillwindfarm.com.au/community-investment-program](http://www.stockyardhillwindfarm.com.au/community-investment-program)

## Project presentations

The Stockyard Hill Wind Farm project team is happy to speak with community groups who are interested in the development of this project. If your community group wishes to receive a project presentation, please call 1800 753 730.

## CONTACT US

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# STOCKYARD HILL WIND FARM

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Welcome to the 16th edition of the Stockyard Hill newsletter. This newsletter provides information to the communities involved in the Stockyard Hill Wind Farm development.

More copies are available by either contacting us, or downloading from our website.

## Project update

In early 2014 Origin commenced discussions with the community about the possibility of increasing the turbine tip height from 132 to a maximum 165 metres.

Origin has now resumed the environmental and technical assessments required to support an application to amend the project's planning permit. The authority responsible for assessing this application is the Victorian Minister for Planning.

If approved, an amended planning permit would enable Origin to use the latest wind turbine technology. Modelling suggests newer turbine technology is likely to produce more clean energy based on the same or less number of turbines.

Although a final turbine design has not yet been selected, the turbine capacity is expected to remain within the same range as originally envisaged in the approved planning permit (up to 3.4 MW).

At this stage we are working towards lodging the planning permit amendment application to the Victorian Minister for Planning in the first half of 2016 and we will continue to keep landowners, neighbours and the broader community informed of the progress of this process.

## Changes to the Victorian Planning Provisions

When Origin started discussions with landowners about amending the wind farm planning permit in early 2014, the Victorian Planning Provisions required wind farm developers to obtain the consent of landowners whose houses are within two kilometres of a proposed turbine location. To date, Origin has obtained the consent of nearly 90% of landowners.

In April 2015 the Planning Provisions were changed by amendment VC124. This amendment changed the allowable distance of a turbine to a dwelling from two kilometres to one kilometre with the landowner's consent.

Origin has and will continue to honour the consent agreements entered into with landowners within two kilometres of a turbine, despite this change in government policy.

## SODAR monitoring – mobile wind data unit to strengthen case

SODAR (*sonic detection and ranging*) monitoring was initiated in December 2013 and will continue up until the commencement of construction.

SODAR monitoring units are designed to measure wind speeds, direction and inflow angle information at various heights above ground level. Complementing the meteorological monitoring masts (“met masts”) already in the project area, the SODAR monitoring units are portable, stand-alone units with their own solar power supply and communications system.

Origin is able to move the SODAR units to different locations across the project area. The data from these units will continue to complement data from the six stationary met masts to improve our knowledge of the wind flow, vertical wind profile and wind resource distribution across the entire project area.

The data we’ve received to date reinforces our belief that Stockyard Hill Wind Farm is one of the strongest performing wind sites in Australia.

### Community investment

Origin was pleased to contribute funds to the Lismore community bus committee, which is raising funds to replace the ageing Lismore community bus.

Replacing the bus was rated as a top priority in a survey completed by local groups and residents. As well as providing a vital service to the local aged care network, the community bus provides safe transport to social functions, is available for the school



to use for excursions, and relieves the pressure of not having reliable transport in the district.

The Lismore community bus committee, formed by dedicated residents, has raised approximately \$40,000 to date. The committee will be hosting further fundraisers, with the goal of raising the remaining funds needed to purchase a new bus in the next 18 months.

Both the Skipton Football and Netball Club and the Beaufort Football and Netball Club also benefitted from the Stockyard Hill Wind Farm community investment program during the last community investment cycle. The Skipton Football and Netball Club received funds towards a new scoreboard for their netball courts; and the Beaufort Football and Netball Club for equipment and coaching for junior netball teams.

Applications to the Stockyard Hill Wind Farm community investment program are reviewed biannually, in April and October. Any applications submitted throughout the year will be saved and reviewed at these times. More information about our community investment program can be found on the community page of our website. [www.stockyardhillwindfarm.com.au/community](http://www.stockyardhillwindfarm.com.au/community)

### Project presentations

The Stockyard Hill Wind Farm project team is happy to speak with community groups who are interested in the development of this project.

If your community group wishes to receive a project presentation, please call 1800 753 730.

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*View West of Skipton Road,  
near Thompsons Road May 2014*

# STOCKYARD HILL WIND FARM

Newsletter | Edition 15: May 2014

Welcome to the 15th edition of the Stockyard Hill newsletter. This newsletter provides information to the communities involved in the Stockyard Hill Wind Farm development. More copies are available by either contacting us, or downloading from our website.

## Improving project efficiencies

Origin has started discussions about potentially increasing the dimensions of the Stockyard Hill Wind Farm's towers and blades that are currently approved to be constructed.

Origin would like to increase the maximum height the project's blades can reach (tip height) from the already permitted 132 metres to up to 165 metres. The increased tip height would come from a combination of increased tower height (from 80 up to 100 metres) and blade length (from 52 up to 65 metres) to enable the project to use the latest wind technology.

The changes would result in an increased 'swept area' for each tower. This would help drive down the cost of energy generated from the project and provide further environmental benefits, with more clean energy produced from the same number of wind towers.

Although a final turbine design has not yet been selected, the turbine capacity is expected to remain within the same range as the turbine dimension conditions in the existing approval (2 – 3.4 MW). The benefits come from advanced technology and greater swept area created by the larger blades.

A planning application to allow for the increase in tip height requires agreement from participating landowners, neighbours living within two kilometres of a proposed wind turbine and approval by the State Government.

Origin is commencing discussions with landowners, the Pyrenees Shire Council, and relevant regulatory authorities and expects the whole planning process to take at least 12 months. There will be no change to the proposed transmission line route or structures, or to the already permitted terminal station near Lismore.

Further assessments in relation to the potential effect of the proposed changes on matters such as aviation, flora and fauna, visual impact, shadow flicker and noise will also influence the final dimensions of wind turbine selected. Origin will be consulting with the public on these matters as the process progresses. (A sample photomontage is provided on the next page.)

If the permit amendment is not pursued, Origin intends to progress the project as permitted in October 2010.

To stay up to date please visit the project website at [www.stockyardhillwindfarm.com.au](http://www.stockyardhillwindfarm.com.au) or call **1800 753 730** for more information or to arrange a meeting.

## Fast Facts

- Seeking to increase blade tip height from 132 metres to up to 165 metres
- The turbine capacity is expected to remain in the 2-3.4MW range
- Amendment process expected to take at least 12 months
- No changes to the proposed transmission line route or permitted terminal station



COMPARATIVE PHOTOMONTAGE WITH WIND TURBINES

**View from Skipton Road, approximately 6km South of Beaufort looking due East**



**IMPORTANT NOTE:** The photomontage shows wind turbines of a generic type with maximum dimensions (80 tower, 52m blade, 132m total tip height) and at locations as specified within the Stockyard Hill Wind Farm Planning Permit. These are shown against wind turbines with possible maximum dimensions (100 tower, 65m blade, 165m total tip height) that are currently being considered for a possible permit amendment. The final turbine dimensions, locations, and type of turbines will be subject to technical, planning and environmental assessment as well as relevant regulatory approvals processes. As such, the supplied photomontage should be viewed as indicative only and may be subject to change.

**NVP03**  
Location data reference:  
Grid Datum: MGA94 Zone 54

Easting: 710048  
Northing: 5848861  
Elevation: 378m

Distance to nearest turbine:  
0.2km approx (T41 to NW)

Distance to nearest visible turbine:  
0.5km approx (T53 to SE)



**Stockyard Hill Wind Farm**

For: Origin Energy



Viewpoint NVP03  
Skipton Road

Project No: 0247530  
Drawing No: NVP03-21  
Revision No: 0

Date: 8 May 2014  
Drawn by: ML  
Reviewed by: AW

## SP AusNet appointed

Origin has appointed SP AusNet to provide the next stage of detailed planning for the Stockyard Hill Wind Farm project. This arrangement allows SP AusNet and various sub-contractors to progress the preliminary design of the wind farm, including civil and high voltage construction planning, and to firm up cost assumptions whilst ensuring compliance with planning and environmental requirements.

This approach – called ‘Early Contractor Involvement’ – is commonly used in large scale projects like wind farm developments. The appointment of SP AusNet represents an important milestone for the Stockyard Hill project.

The detailed planning will precede Origin seeking firm offers for subsequent works.

## Origin supports driver education

Origin was pleased to support the Driver’s Education Program which has been run by the Beaufort Community Bank branch of Bendigo Bank for the past five years. The Driver Training Academy aims to teach young drivers much more than how to pass the driving licence test. As well as assisting learner drivers reach the required 120 hours of supervised driving time, the participants learn in a group program where they rotate roles between driver, coach and assessor guiding and assisting their peers.

Beaufort Community Bank Chairman, Tim Chandler said “We were overwhelmed by the response of young people of the Beaufort community keen to participate in our Driver Education Program this year and are very thankful to our partners Origin Energy, Beaufort Apex Club and Youth Foundation Victoria for assisting.”

Other groups which have benefitted from the Stockyard Hill Wind Farm community investment program during the past 12 months include the Skipton Progress Association, Lismore Primary School, Beaufort Agricultural Society, Skipton Primary School as well as the Beaufort Primary School Parents and Friends Association.

The next round of recipients will be announced shortly.

Applications are reviewed biannually, in April and October. Any applications submitted throughout the year will be saved and reviewed at these times. More information about our community investment program and the application form can be found on our website on the community page.

[www.stockyardhillwindfarm.com.au/community](http://www.stockyardhillwindfarm.com.au/community)

## Quarry update

As flagged in the last two editions of this newsletter, Origin is exploring the option of developing a local quarry within the project site to supplement the large amounts of crushed rock and bulk fill material needed for wind farm construction.

This would reduce pressure on local public roads during the construction of the wind farm.

We recently submitted a Draft Work Plan to the Department of State Development and Business Innovation (DSDBI). The Work Plan was accompanied by an Environmental Management Plan, detailing how all environmental impacts would be managed during establishment and operations of the proposed quarry. DSDBI has endorsed this Work Plan, which will form the basis of a planning permit application.

This planning permit application will be submitted to the Pyrenees Shire Council, along with a separate report to assess the proposed quarry against the provisions of the Shire of Pyrenees planning scheme. This will also include reports on traffic, social and visual impacts.

Following the submission of the planning application to the Pyrenees Shire Council the community will have the opportunity to submit their views to the decision makers.

Origin will ensure all relevant parties are notified when the planning permit application is lodged with the Pyrenees Shire Council.

## Wind farm quarry investigation



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# STOCKYARD HILL WIND FARM PLANNING PERMIT AMENDMENT



Origin is seeking a planning permit amendment to allow the proposed Stockyard Hill Wind Farm project to increase the maximum allowable wind turbine tip height to 180 metres.

During the past months we have been completing the assessments and studies that are necessary to accompany the planning permit amendment application, including:

- Environmental Noise
- Shadow Flicker & Blade Glint
- Electromagnetic Interference & Telecommunications
- Landscape & Visual Amenity
- Ground Flora & Fauna
- Birds & Bats
- European & Aboriginal Heritage
- Aircraft Safety
- Traffic Impact

The planning amendment application will be submitted to the Victorian Minister for Planning in late April 2016.

If you would like to discuss this planning amendment application or the project in person please contact us via:



**1800 753 730**  
(freecall only from fixed landline)



**stockyardhillwindfarm@originenergy.com.au**



**www.stockyardhillwindfarm.com.au**

## SUMMARY OF PROPOSED CHANGES

- Turbine envelope - overall maximum tip height must not exceed 180m above natural ground level.
- Results in a reduction in overall number of turbine locations (149, down from 157 originally approved in 2010).
- Optimisation and relocation of the associated civil and electrical infrastructure.
- Application to be assessed against latest legislation, standards and guidelines for Victorian Wind Energy Facilities.

## Examples of local advocacy

Example of coverage of Origin/Stockyard Hill's community investment program and community investment poster.

*Skipton Community News*  
28 June 2012 Page 3

### Origin Kicks A Goal For Skipton Footy Club

Origin has kicked a goal this season with the Skipton Football and Netball Club by supporting the club with its purchase of the new goal posts and safety padding.

Skipton FNC club President Graham Layley, said the new goal posts and padding will benefit all players that play at Skipton, by being up to date with safety regulations. It also assisted the club in its vision to become a more professional outfit.

"Our old posts were just about falling over, so to be able to invest in new posts with the support of Origin was fantastic," Graham said.

"We really appreciate Origin coming on board and assisting us improve our facilities, these improvements will benefit the whole community for years to come."

Origin's Community Relations Advisor Ian Courtney said Origin's aim through the Stockyard Hill Wind Farm community investment program was to assist local clubs and groups develop and become more sustainable.



## PROUD TO SUPPORT THE SKIPTON PRIMARY SCHOOL MELBOURNE CUP FESTIVAL

### Stockyard Hill Wind Farm

- Permit granted in 2010 for 157 wind turbines
- Turbine tip height – 132 metres
- Project area – approximately 156 km<sup>2</sup>
- Underground electrical cable network, linking each turbine to a substation
- Above ground powerlines linking each substation
- Projected yearly output of 1,650,000 GWh per annum

PROJECT HOTLINE 1800 753 730  
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