

29 June 2015

**NSW Planning Assessment Commission Determination Report
Capital 2 Wind Farm Turbine Blade Length Modification (10_0135 MOD2)**

The NSW Planning Assessment Commission (the Commission) has prepared this report under the delegation of the former Minister for Planning and Infrastructure.

1. BACKGROUND

The Capital 1 and Capital 2 Wind Farms are located approximately 10 kilometres north of Bungendore and are both owned and operated by Infigen Pty Ltd (Infigen).

Capital 2 wind farm was granted approval by the Commission in November 2011 under Part 3A of the *Environmental Planning and Assessment Act 1979* (the Act).

The project approval has been modified twice (MOD1 and MOD3) and currently allows: the development and operation of 41 wind turbines with a net generating capacity of 143.5 megawatts (MW) of electricity; a separate connection to a 33kV overhead transmission line; and onward connection to Trans Grid's Canberra-Kangaroo Valley 330kV transmission line.

Once operational, Capital 2 will produce approximately 315,000 MW hours of electricity per year.

2. CURRENT PROJECT MODIFICATION (10_0135 MOD2)

Infigen Pty Ltd (the Proponent) has applied for a further modification to the project approval for Capital 2. The proposed modification involves allowing an increase in the length of the approved turbine blades by up to 6 metres. This would increase the maximum turbine blade diameter from the approved limit of up to 114 metres to a maximum diameter of up to 126 metres.

The modification application does not propose an increase in the maximum approved turbine tower height of 100 metres, or in the maximum turbine tip height of 157 metres. Installing the longer blades will therefore in many cases require the height of the turbine tower to be reduced to remain within the approved maximum turbine height.

The Proponent has advised that increasing the length of the blades would increase the efficiency of electricity generation by up to 10% compared to the approved project; and as a result would further assist the NSW Government to meet the objectives in the NSW renewable Energy Section Plan 2013 and its current target of reaching 20% of electricity through renewable methods.

The modification request and associated Environmental Assessment was exhibited by the Department of Planning and Environment (the Department) from 16 October to 30 October 2014. A total of 36 submissions were received from the public all objecting to the modification, as well as submissions from the Office of Environment and Heritage (OEH), Roads and Maritime Services (RMS) and one from the Australian Industrial Wind Turbine Awareness network. No submissions were received from residents living within two kilometres of Capital 2 turbine locations.

Subsequent to the exhibition, the Proponent provided a response to issues raised in the submissions, including a visual impact assessment of the potential variation in appearance between the approved turbines and the proposed increased wind turbine generator (WTG) blade diameter (which was then made publicly available by the Department on its website).

3. DELEGATION TO THE COMMISSION

This modification application was referred to the Commission on 6 May 2015 for determination under Ministerial delegation as more than 25 objections were received during exhibition of the application.

Ms Lynelle Briggs AO, the Chair of the Planning Assessment Commission, nominated Ms Annabelle Pegrum AM (chair), Dr David Chessell and Mr Geoff Carmody to constitute the Commission for the project.

4. SECRETARY'S ENVIRONMENTAL ASSESSMENT REPORT

The Department's consideration of the issues raised in the submissions and in the Proponent's response are addressed in the Secretary's Environmental Assessment Report (Assessment Report) which identifies and addresses the following key issues:

- Visual impact;
- Noise impacts;
- Bird and bat impacts;
- Road transport impacts.

Together with other issues:

- Socio-economic;
- Project decommissioning; and
- Fire risk.

The Assessment Report concludes that the Department considers *'that the proposed modification is in the public interest and should be approved'*. The Department also considers that with the inclusion of minor updates, *'the current conditions of approval would effectively manage and minimise any residual impacts associated with the proposed modification'*.

5. SITE VISITS AND MEETINGS

Site Visit

On Thursday morning 4 June 2015 the Commission inspected the site with the Proponent. Representatives from the Department were also present at this meeting as observers and did not participate in discussions between the Commission and the Proponent.

During the site inspection, the Proponent advised that:

- any increase in noise from the wind farm would be within the current noise regulation criteria. Subsequent to the site visit the Proponent confirmed that *'the noise emanating from the wind farm (assuming the modification is approved) could be above or below that forecast in the original EA. However, it will not exceed the approved limits'*.
- the visual impact of the increase in blade size and swept area would be unnoticeable from the nearest non-associated residence which is at a distance of 2.5km as shown on the photomontage;
- the turbine tower would not need to change in diameter or bulk to accommodate the longer blades;
- that there would be no need to change the current approved location for any of the turbines as a consequence of the proposed increase in blade size and associated swept area or reduced turbine height. With regard to this matter the Commission also noted correspondence from the Proponent to the Department of April 2014 which stated that *'should a larger diameter WTG be used, it is likely that this will result in a reduced number of WTGs to be deployed, due to the requirement to provide adequate space between WTGs'*.

Public Meeting

On Thursday 4 June 2015 the Commission held a public meeting at the Carrington Inn at Bungendore, commencing at 1:00 pm. Nineteen submissions were presented to the Commission. A list of the speakers is at Appendix 1. All but one raised concerns or objections to the proposed modification of the project. Issues raised and the key points from the submitted written comments are summarised at Appendix 2.

Palerang Council was invited to meet the Commission. The Council's Director of Planning and Environmental Services advised that the Council did not need to meet the Commission to discuss the project.

6. ADDITIONAL INFORMATION FROM THE DEPARTMENT AND PROPONENT

Following the public meeting the Commission sought clarification from the Department regarding the photomontages provided by the Proponent for the Department's assessment, noise impacts and the status of (any) Community Consultative Committee.

7. COMMISSION'S CONSIDERATION

The Commission has considered the views expressed at the public meeting and in community and agency submissions, together with the Proponent's response and the Assessment Report.

Key considerations are addressed below:

7.1 Consideration of key Issues Related to the Proposed Project

a. Visual impacts

The Department states that it recognises that *'it would be impossible to completely mitigate the visual impacts of the turbines within the landscape'*. If the mitigation measures are implemented as already approved, the Department's view is that the proposed modification *'would not result in any material increase in the level of visual impact from what was originally approved'*.

The Commission notes the concerns regarding visual impact raised by the community at the Public Meeting. A number of speakers questioned the standard and accuracy of the Visual Impact Assessment provided by the Proponent. Concern was also raised regarding public notification of the Visual Impact Assessment, with some people noting that they had not been given sufficient opportunity to comment on the assessment or the associated photomontages.

The Commission raised these concerns with the Department which confirmed that the visual impact assessment formed part of the Proponent's response to submissions and that the photomontages represent *'the worst-case visual impact of the proposal'*. The photomontages were provided in electronic format allowing the Department to consider each in an enlarged format. The Commission also considered the enlarged photomontages and noted that the closest non-associated residence is more than 2.5 kilometres from the Capital 2 turbines and that the overall height of the turbine would not increase with the longer blades.

The Commission considers that the proposed increase in the turbine blade length will not have a material additional visual impact on non-associated residences over those already approved. The Commission agrees with the Department's assessment that the current conditions of approval are sufficient to mitigate visual impacts.

b. Noise impacts

A number of public submissions and speakers at the meeting expressed concern that the increased blade length would result in significant increases in noise with associated health effects. Some people referenced the sound that the tip of the blade emits while cutting through air, and the low frequency noise related to the functioning of the wind turbine generator as causing 'sleep deprivation' and leading to other health related issues. Concerns were also raised relating to the Department's ability to investigate noise non-compliance with conditions of approval.

Modelling conducted as part of the assessment concluded that the modified project would *'comfortably comply with the approved operational noise criteria under all assessable wind speeds at all the non-associated residences'*. Having regard to the Capital 1 turbines and the nearby Woodlawn Wind Farm no increase in cumulative noise impacts at non-associated residences is expected.

The Commission also notes that the monitoring of noise compliance is the responsibility of the Environment Protection Authority through the Environmental Protection Licence system and not a responsibility of the Department.

The latest independent assessment by the National Health and Medical Research Council (NHMRC) of the scientific evidence on wind farms and human health was released in February 2015. The NHMRC Statement concludes that *'there is currently no consistent evidence that wind farms cause adverse health effects in humans'*. On this basis the Commission is not able to support local claims that wind farms will have adverse noise related health impacts.

The Commission is satisfied that no significant increase in noise impact is likely from the proposed longer blades and that the current conditions of approval and compliance are sufficient and appropriate to manage any associated noise impacts.

c. Bird and Bats impacts

The potential increased impact on birds and bats due to the proposed longer turbine blade (which would result in an increase of up to 22% in the rotor swept area) was raised in a number of submissions.

The Office of Environment and Heritage (OEH) raised specific concerns regarding the impact on the 3% of bird species that fly above 20 metres, notably raptor species active in the local area.

The Proponent's additional bird and bat assessment concludes that the longer blade length will not present any appreciable difference in the approved strike risk of the birds and bats, including the Wedge Tail Eagle (raptor). The Department advises that OEH has accepted the additional assessment findings of the Proponent.

Nevertheless, OEH has requested that the modification conditions include monthly mortality assessments, consideration of the cumulative impacts of the project with Woodlawn Wind Farm and consultation with OEH in the preparation of the Bird and Bat Adaptive Management Plan (BBAMP).

The Proponent is reluctant to accept monthly assessments due to their cost implications and has also raised commercial concerns regarding the current BBAMP turbine 'switch-off' requirements in response to unacceptable bird and bat impacts.

The Department believes that the BBAMP should provide a measure of flexibility in the frequency of mortality assessments. On balance, the Commission considers that the Department's recommended condition is reasonable in providing flexibility with regards to the monitoring, by agreement with OEH.

The Department does not support (in its entirety) the Proponent's arguments regarding switch-off obligations related to unacceptable bird or bat impacts, but recommends a fine tuning of the condition to clarify that the switch off would be a temporary mitigation, as directed by the Secretary. The Department also recommends a strengthened consultation role for OEH in the development of the BBAMP. The Commission agrees with this approach and has updated the conditions accordingly.

The Commission also supports the OEH recommendation and the Department's assessment to extend the current BBAMP to include cumulative impacts with Woodlawn Wind Farm.

d. Road Transport impacts

The transportation of longer turbine blades to the site would require careful management in terms of impacts to traffic on State and local road networks. RMS has not objected to the proposed modification, but advises that the Proponent would be required to obtain appropriate permits for the transport of oversize vehicles, and provide it with further information on weight loads and proposed transport routes to allow appropriate assessment of the suitability of the roads for transporting the blades. The Department considers that *'the transport impacts of the proposed modification would be able to be effectively managed through the development and implementation of the approved Transportation Management Plan, and that no additional conditions are necessary to manage this issue'*.

The community did not raise specific concerns regarding impacts to traffic and transport of the longer blades, although one speaker at the public meeting suggested that associated road maintenance should be a responsibility of the Proponent, as they use the roads frequently.

Having regard to the current approval and Transportation Management Plan requirements the Commission does not consider that the proposed modification requires additional or modified conditions.

e. Community Consultative Committee

At the public meeting there was a tangible lack of community confidence in the Proponent that appeared to be heightened by the lack of a functioning Community Consultative Committee (CCC). Concerns were expressed regarding communication by the Proponent and what the people at the meeting perceived to be 'modification creep'. The tenor of the meeting suggested that consultation by the Proponent was not forthcoming and that better communication would have gone some way to allay community concerns regarding the modification – particularly with regard to visual amenity and noise compliance.

The Commission sought clarification from the Department and was advised that because Capital 1 and Capital 2 wind farms pre-dated the *2011 Draft NSW Planning Guidelines: Wind Farms* (Draft Guidelines) the project did not require a CCC. The Department noted approved conditions regarding the Proponent's obligations for communications and attendance to complaints, including their Community Information Plan, and concluded that *'as the proposal relates only to minor change to turbine design, the Department considers it does not trigger, or give rise to the need for, any change to these existing community consultation arrangements'*.

The Commission is of the view that this modification should trigger the establishment of a CCC consistent with the spirit and intent of the Draft Guidelines. This would go some way towards restoring confidence in the community that the modification proposed will be managed with full compliance of the approved conditions and provide a *'forum for open discussion between representatives of the proponent, the community, the council and other stakeholders on issues directly relating to the assessment of the wind farm and if approved, its environmental performance and community relations, and to keep the community informed on these matters'* (Draft Guidelines Appendix C).

The Commission has amended the conditions accordingly.

7.2 Other Issues

a. Property Values;

Some speakers at the public meeting attributed what they believe is a fall in property values directly to the wind farm and expressed concern for impacted neighbours that they felt should have the right to negotiate with the Proponent for property acquisition or to receive financial compensation. Others noted that while host property owners receive a financial benefit from the turbines, their neighbours may receive no benefit at all while being subject to visual and associated economic impacts without compensation.

The Commission notes that the Land & Environment Court matter *King & Anor v Minister for Planning; Parkesbourne-Mummel Landscape Guardians Inc v Minister for Planning; Gullen Range Wind Farm Pty Limited v Minister for Planning* ([2010] NSWLEC 1102) considers requests for compensation for 'blight' as related to loss of future property value or loss of amenity for sites near a wind farm. The judgement determined that there was no loss of value to which the Court could lawfully have regard as the wind farm was permissible with consent and that *'if the concept of blight and compensation ... were to be applied to this private project, then any otherwise compliant private project which had some impact in lowering the amenity of another property (although not so great as to warrant refusal on general planning grounds when tested against the criteria in s 79C of the Act) would be exposed to such a claim'*. The Commission accepts this judgement.

b. Project decommissioning

Some concern was expressed that decommissioning may not happen in a timely or appropriate manner. The Commission appreciates that the longer blades may result in different decommissioning staging and considers that there is value in the Department recommendation to *'capture the situation where turbines are decommissioned progressively'* with an additional requirement for the Decommissioning Management Plan to be prepared one month prior to the decommission of any turbine.

c. Fire Risks

The Commission accepts the Department's advice that the proposed modification for increased blade length does not increase the fire risk of the approved project and agrees that no additional conditions are required to regulate risk. The project approval contains strict conditions to address fire risks, including a requirement that all project components on the site are designed, constructed and operated to minimise ignition risks. The Proponent must also regularly consult with the Rural Fire Service over the life of the project.

The Commission notes that some of the concerns expressed in submissions relate to wind farms more generally and to the Capital 2 wind farm current approval rather than specifically to the modification under consideration.

8. COMMISSION'S DETERMINATION

The Commission has considered the information available including the Secretary's Environmental Assessment Report and associated documents, agency and public submissions, issues raised at the public meeting and enlarged photomontages provided by the Department.

The Commission is satisfied that the modification as proposed will increase the generation efficiency of the project and electricity production and is in the public interest. The Commission has had regard to the justification by the Proponent that *'the increase in*

electricity production results in a lower cost of energy and assists the NSW Government meet the objectives of the NSW Renewable Energy Action Plan 2013 and the NSW 2021 plan of reaching a renewable energy target of 20% by 2020'.

The Commission considers that the increased turbine blade length proposed will not have a significant visual impact on non-associated residences over those already approved and will maintain noise levels within the approved operational noise criteria.

The Commission has considered the merits of the modification and has approved the application subject to the conditions as recommended by the Department that include: a strengthening of bird and bat monitoring with a clearly defined consultation role for OEH; refinement of the Decommissioning Management Plan to capture progressive turbine decommissioning; and has added a new condition requiring the establishment of a Community Consultative Committee.



Annabelle Pegrum AM
Chair of the Commission



David Chessell
Member of the Commission



Geoff Carmody
Member of the Commission

Appendix 1

List of speakers

PLANNING ASSESSMENT COMMISSION PUBLIC MEETING,
CAPITAL 2 WIND FARM PROJECT

Date: Thursday 4 June 2015, 14:00

Place: Carrington Inn of Bungendore, 21 Malbon Street, Bungendore 2621

Speakers:

Mark Tomlinson

Elizabeth Tomlinson (on behalf of Greg Faulkner)

Jenny Hajek

Anthony Gardner (on behalf of Paige Davis)

Marguerite Gardner (on behalf of John Fern)

Ruth Corrigan

Michael Crawford (Residents against Jupiter Wind Turbines)

John Reardon

Anthony Gardner

Pamela Hawke (on behalf of Duncan & Karina Briggs)

Marguerite Gardner

Jane Keany

Pamela Hawke

Barry O'Neill (on behalf of Murray Hambrooke & Margie Hambrooke)

Barry O'Neill

Jane Keany (on behalf of Tony Hill)

Appendix 2

Summary of issues raised at Public Meeting

Speakers from the local community questioned the validity of the Proponent's visual assessment. There was particular emphasis on the visual impact from their properties, with the turbines becoming the predominant feature of their rural landscape. They claimed that not only would the towers have an environmental impact, but that the increase in blade size will also increase the visual impact.

Concerns were also raised that the photomontages were not available when the modification was presented to the local community. As a result many at the meeting felt that they had insufficient opportunity to comment on them once they were published on the Department's website. Some speakers commented that because the photomontages are static rather than animated, they do not sufficiently represent the visual impact of the increased blade length and associated swept area.

Various speakers expressed reservations about the Department's knowledge on infrasound matters. It was also argued that the noise predictions presented by the Proponent are subject to dispute as prediction modelling can be easily manipulated and that sound monitoring should be undertaken continuously.

The potential for health impacts arising from low frequency noise and infrasound was also raised. Some speakers argued there are clearly documented health impacts and that some people are currently suffering sleep disorders including interrupted sleep, humming sounds and palpitating heart conditions on awakening.

A number of speakers expressed concern regarding the Department's ability to investigate non-compliance with the noise conditions of approval.

Social impacts were said to have already occurred because the proposal has divided the community between 'associated' and 'non-associated' property owners and those who supported wind farms over those who did not. Speakers also questioned the level of community benefit, with some suggesting the proposal should include additional local contributions and be conditioned upon the creation by Infigen of a Community Consultative Committee.

Other matters raised at the meeting include:

- Concerns regarding decommissioning and disposal of the turbines;
- The need for a security bond for remediation;
- Additional requirements for fair buyouts rights for 'non-associated' farms 'on just terms';
- Negative effect of the wind farms on property values generally because of loss of visual and other amenity;
- Community impacts because of 'sterilisation' of surrounding area for future development;
- The need for closer monitoring of bird/bat strike for the first three years of operation;
- Community funding by the proponent being relatively modest and a need for additional community compensation and consultation.

One speaker argued for the benefits of having windfarms in the area and on their property. The speaker noted that the proponent had undertaken noise measurements in various locations of his home which showed that the noise impact was minimal. There had been no health related issues.

The majority of individuals who spoke at the public meeting tabled their submissions to the Commission for further consideration.