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Our ref: 13/10745-1

Ms Annmaree Lavery
Newtricity
1 Raven Street
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Dear Ms Lavery

**Revised Secretary's Environmental Assessment Requirements
Biala Wind Farm (SSD 13_6039)**

I refer to advice submitted to the Department in November and December 2014 by your consultant (ERM) about amendments to the proposed Biala Wind Farm.

In response to this advice, the Department has elected to issue revised Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the Biala Wind Farm (see attached).

Please ensure that the EIS also considers the issues raised previously by government agencies, and attached to the Director-General's requirements issued for this development on 12 August 2013. Please also consider the additional comments from the NSW Office of Environment and Heritage (see attached).

Prior to exhibiting the EIS, the Department will review the document to determine if it adequately addresses the SEARs.

Please contact Tracy Bellamy on the above details if you would like to discuss this matter.

Yours sincerely

Mike Young
Director
Resource Assessments
as delegate for the Secretary

19.5.15

Secretary's Environmental Assessment Requirements

Section 78A (8A) of the Environmental Planning and Assessment Act 1979
Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 13_6039
Development	Biala Wind Farm The construction, operation and decommissioning of a wind farm with: • up to 31 turbines with capacities up to 4 megawatts (MW) and an approximate maximum height of up to 150 metres above ground level; and • ancillary structures, access tracks, onsite electrical infrastructure, and temporary concrete batching plant(s). The proposed transmission line to connect the wind farm to the electricity grid no longer forms part of the State Significant Development application, and will be assessed separately under Part 5 of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act).
Location	Approximately 8 km east of Biala and 14.5 km southwest of Crookwell, in the Upper Lachlan Local Government Area
Proponent	Newtricity
Date of Issue	19 May, 2015
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (EP&A Regulation) and include the following: 1. A detailed description of the development (Clause 6 of Schedule 2 to the EP&A Regulation), for both the wind farm and associated infrastructure, including: • details of construction, operation and decommissioning, including compliance with building standards and relevant codes / specifications for the construction of wind farms; • the proposed external cladding materials, underground/overhead cabling between turbines, electrical substations, meteorological monitoring masts, access roads (including internal access tracks), road/intersection upgrades, obstacle lighting; and temporary facilities such as concrete batching plants and construction compounds; • site plans and maps at an adequate scale with dimensions showing: – the location and dimensions of all project components including coordinates in latitude/longitude and maximum AHD heights of the turbines; – existing environmental features (e.g. watercourses, vegetation communities), infrastructure, land use (including nearby residences and approved residential developments or subdivisions), the number of turbines within 2 km of a dwelling or approved dwelling, and the location/siting of the development (including associated infrastructure) in the context of this existing environment; • a timeline identifying the development's proposed construction and operation components, their envisaged lifespan and arrangements for decommissioning (including the proposed funding arrangements and how agreements with associated landowners have addressed decommissioning liabilities); and • resourcing requirements (e.g. water supply and sand/gravel).

	2. A summary of the EIS and a description of the strategic need, justification, objectives and outcomes (Clause 7 of Schedule 2 to the EP&A Regulation) for the the wind farm and associated infrastructure, including: • a justification for the development taking into consideration the objects of the EP&A Act, including how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the development; • a strategic assessment of the need, scale, scope and location for the project including consideration of: – the predicted electricity demand in NSW and the National Electricity Market; – the Commonwealth's Renewable Energy Target Scheme; – the greenhouse gas benefits of the project (quantified and substantiated), taking into consideration sources of electricity that could realistically be replaced (using the NSW wind farm greenhouse gas savings tool – www.environment.nsw.gov.au/climatechange/greenhousegassavingstool); • an analysis of feasible alternatives to the carrying out of the development, including: – an assessment of the environmental costs and benefits of the development relative to alternatives and the consequences of not carrying out the development, the suitability of the chosen option and whether or not the development is in the public interest; – an analysis of the suitability of the project with respect to potential land use conflicts with existing and future surrounding land uses (including other proposed or approved wind farms, existing or proposed electricity transmission lines, rural residential development, building entitlements and subdivision potential), land of significant scenic value, land of high agricultural value, mineral resources, forestry, conservation areas and Crown land, taking into account local and strategic land use objectives, the potential for social and economic impacts on the local community, and the Environmentally Sensitive Area Mapping held by Upper Lachlan Shire Council; and – description of the alternatives considered (location and/or design) for all project components, and justification for the preferred project demonstrating its benefits on a local and strategic scale and how it achieves stated objectives and any measures to offset residual impacts (e.g. community enhancement programmes); and • an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/mitigation measures, including Section 79C of the EP&A Act, applicable State Environmental Planning Policies (SEPP), Local Environmental Plans, the nature and extent of any prohibitions that apply to the development and demonstration that the site is suitable for the proposed use (including in accordance with SEPP 55 – Remediation of Land). The EIS must also: • provide an overview of the approvals process for the transmission line connection to the existing high voltage electricity network under Part 5 of the EP&A Act, including timing, responsibilities, and how this process would integrate with the planning and development of the wind farm under Part 4 of the EP&A Act; • sufficient information to demonstrate the feasibility of the transmission line having regard to the acceptability of likely environmental impacts (including cumulative impacts), land use constraints, and any technical constraints associated with connecting to the existing high voltage electricity network; and • consider the minimum form and content requirements of the Draft <i>NSW Planning Guidelines: Wind Farms</i> (as updated), including procedures for consulting with the community and stakeholders, and meeting assessment requirements.
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	Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data; • consideration of potential cumulative impacts due to other development in the vicinity, paying particular attention to existing and proposed wind farms, such as Gullen Range, Gunning and Crookwell 1, 2 and 3; and • measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.
Key issues	The EIS must address the following specific matters for both the wind farm and associated infrastructure: Landscape and Visual Impacts - the EIS must: • provide a comprehensive assessment of the landscape character and values and any scenic or significant vistas of the area potentially affected by the project taking into account cumulative impacts from surrounding proposed, approved or operational wind farms in the locality, including an assessment of the significance of landscape values and character in a local and regional context. This should describe community and stakeholder values of the local and regional visual amenity and quality, and perceptions of the project based on surveys and consultation; • assess the impact of shadow "flicker", blade "glint" and night lighting from the wind farm; • identify the zone of visual influence of the wind farm including consideration of night lighting (no less than 10 km) and assess the visual impact of all project components on this landscape; • include photomontages of the project taken from potentially affected residences and in particular from all non-host dwellings within 2 km of a proposed wind turbine (including approved but not yet developed dwellings or subdivisions with residential rights), settlements and significant public view points, and provide a clear description of proposed visual amenity mitigation and management measures for the wind farm. The photomontages must include representative views of turbine night lighting if proposed; • provide an assessment of the feasibility, effectiveness and reliability of proposed mitigation measures and any residual impacts after these measures have been implemented; and • if any agreements with residents in regard to visual impacts are proposed, provide sufficient information to enable a clear understanding of what has been agreed and what matters are covered by any such agreements. Noise and Vibration Impacts - the EIS must: • include a comprehensive noise assessment of all phases and components of the project taking into account cumulative impacts from surrounding approved or operational wind farms in the locality including: turbine operation, the operation of the electrical substation, construction noise (focusing on high noise-generating construction scenarios and works outside of standard construction hours), traffic noise during construction and operation, and vibration generating activities (including blasting) during construction and/or operation. The assessment must identify noise/ vibration sensitive locations (including approved but not yet developed dwellings), baseline conditions based on monitoring results, the levels and character of noise (e.g. tonality, impulsiveness, low frequency etc) generated by noise sources, noise/vibration criteria, modelling assumptions and worst case and representative noise/vibration impacts. The assessment should be based on separate daytime (7am to 10pm) and night time periods (10pm to 7am); • in relation to wind turbine operation, determine the noise impacts under operating meteorological conditions (i.e. wind speeds from cut in to rated power), including impacts under meteorological conditions that exacerbate impacts (including varying

- atmospheric stability classes and the van den Berg effect for wind turbines). The probability of such occurrences must be quantified;
- include monitoring to ensure that there is adequate wind speed/profile data and ambient background noise data that is representative for all sensitive receptors;
 - provide justification for the nominated average background noise level used in the assessment process, considering any significant difference between daytime and night time background noise levels at background noise levels higher than 30 dB(A);
 - consider special audible characteristics, including tonality, amplitude modulation, and low frequency noise (apply penalties where relevant), and identify any risks with respect to tonal, low frequency or infra-noise;
 - clearly outline the noise mitigation, monitoring and management measures that would be applied to the project, including an assessment of the feasibility, effectiveness and reliability of proposed measures and any residual impacts after these measures have been incorporated;
 - if any noise agreements with residents are proposed for areas where noise criteria cannot be met, provide sufficient information to enable a clear understanding of what has been agreed and what matters are covered by any such agreements; and
 - include a contingency strategy that provides for additional noise attenuation should higher noise levels than those predicted result following commissioning and/or should noise agreements with landowners not eventuate.

The noise assessment must be undertaken in a manner that is consistent with the following guidelines:

- Wind Turbines - the South Australian Environment Protection Authority's *Wind Farms Environmental Noise Guidelines (2003)* however, measurements shall be taken at hub height;
- Substation – *NSW Industrial Noise Policy (EPA, 2000)*;
- Site Establishment and Construction – *Interim Construction Noise Guidelines (DECC, 2009)*;
- Traffic Noise – *NSW Road Noise Policy (DECCW 2011)*; and
- Vibration – *Assessing Vibration: A Technical Guideline (DECC, 2006)*.

Biodiversity - the EIS must:

- include an ecological assessment of potential impacts on terrestrial and aquatic ecosystems (including Wattle Creek, Biala Creek and groundwater dependent ecosystems);
- assess and document impacts in accordance with the *Framework for Biodiversity Assessment* unless otherwise agreed by the Office of Environment and Heritage;
- provide justification for site selection of the proposed turbine locations taking into account the potential to use areas of lower habitat value within the site;
- identify threatened species, populations and communities listed under both State and Commonwealth legislation that have the potential to occur on site with particular reference to species identified by the Office of Environment and Heritage (OEH) letters dated 2 August 2013 and 9 January 2015;
- map existing vegetation by vegetation/ community type and include details on existing site conditions, including whether the vegetation comprises a highly modified or over-cleared landscape and the types and quality of habitat resources available (vegetation mapping should consider any Environmentally Sensitive Area Mapping held by Upper Lachlan Shire Council and any areas subject to an agreement with South East Local Land Services);
- map rivers, streams, wetlands and estuaries (as described in Appendix 2 of the *Framework for Biodiversity Assessment*);
- describe baseline conditions for any water resources likely to be affected including water quality objectives (as endorsed by the NSW Government <http://www.environment.nsw.gov.au/ieo/index.htm>) and indicator and trigger values/criteria for the environmental values identified in the water quality objectives in accordance with ANZECC (2000) *Guidelines for Fresh and Marine Water Quality* and or local objectives, criteria or targets endorsed by the NSW Government;

- provide details of the survey methodology employed including survey effort and representativeness for each species targeted and clear justification for species that were discounted from requiring field surveys or further assessment;
- demonstrate a design philosophy of impact avoidance on ecological values, and in particular, ecological values of high significance;
- provide a worst case estimate of vegetation to be cleared (in hectares), including quantifying impacts (in hectares) by vegetation type and threatened species habitat (as relevant);
- assess the significance of impacts to native vegetation, listed threatened species, populations and communities and their habitats with consideration to local and region-based ecological implications, including edge effects, habitat connectivity and distribution of species. The assessment must consider impacts to in-stream and riparian ecology from works close to waterways and/ or waterway crossings. In addition, impact of the project on birds and bats from blade strikes, low air pressure zones at the blade tips (barotrauma), and alteration to movement patterns resulting from the turbines must be assessed, including demonstration of how the project has been sited to avoid and/ or minimise such impacts;
- consider cumulative effects, including the effects of multiple wind farms in the vicinity on bird/bat strike, movement patterns and loss of habitat;
- include details of how flora and fauna impacts would be managed during construction and operation including adaptive management, rehabilitation/ regeneration measures and maintenance protocols;
- demonstrate how the project (with the incorporation of all proposed measures to avoid, mitigate and/ or offset impacts) achieves a biodiversity outcome consistent with the *NSW Government Offsets Policy for Major Projects*. Sufficient details must be provided of the specific areas and management proposed to offset the impacts of the project on biodiversity, and how the offset areas will be secured in perpetuity; and
- address the risk of weed spread, both noxious and environmental weeds, and identify mitigation measures.

Heritage Impacts – the EIS must include an assessment of impacts on Aboriginal and historic heritage, including:

- sufficient information to demonstrate the likely impacts of the project on Aboriginal heritage values/items (archaeological and cultural) and outline proposed mitigation measures (including consideration of the effectiveness and reliability of the measures) in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011) and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010). The assessment must be undertaken by suitably qualified heritage consultants and demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, developing options and selecting options and mitigation measures (including the final proposed measures) be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW, 2010); and
- provide sufficient information to demonstrate the likely impacts of the project on historic heritage values (including heritage vistas) and, where impacts to State or local historic heritage items are proposed, outline proposed mitigation and management measures (including consideration of the effectiveness and reliability of the measures) generally consistent with the guidelines in the *NSW Heritage Manual*. Where impacts to State or local historic heritage items are proposed, a statement of heritage significance must be included.

Traffic and Transport – the EIS must assess the construction and operational traffic impacts of the development, including:

- details of traffic volumes (both light and heavy vehicles) and transport routes during construction and operation;
- assess the potential traffic impacts of the project on road network function (including intersection level of service) and safety, and including impact on existing

- transport including school bus routes and freight operations;
- assess the capacity of the existing road network to accommodate the type and volume of traffic generated by the project (including over-mass /over-dimensional traffic) during construction and operation, differentiating between various raw material deliveries and staff and contractors, including full details of any required upgrades to roads, bridges, site access provisions (for safe access to the public road network) or other road features;
- details of measures to mitigate and/or manage potential impacts, including construction traffic control, road dilapidation surveys and measures to control soil erosion and dust generated by traffic volumes;
- details of access roads within the site including how these would connect to the existing public road network (i.e. site access) and ongoing operational maintenance requirements for both on-site and local roads;
- consideration of relevant RMS and Council traffic/road policies; and
- consideration of appropriate road upgrade and/or maintenance contributions to Council over the life of the project to address impacts on the local road network.

Hazard/Risks – the EIS must include an assessment of the following:

- *Aviation* - potential impacts on aviation safety, including cumulative effects of multiple wind farms in the vicinity, potential wake/turbulence issues, the need for aviation hazard lighting, considering nearby aerodromes and aircraft landing areas, defined air traffic routes, aircraft operating heights, approach/departure procedures, radar interference, communication systems, and navigation aids. Aerodromes within 30 km of the turbines should be identified and impacts on obstacle limitation surfaces addressed. Assess the impact of the turbines on the safe and efficient aerial application of agricultural fertilisers and pesticides in the vicinity of the turbines and transmission line. An Aeronautical Impact Statement (AIS) prepared by an appropriately qualified person including the associated height and cords for each turbine;
- *Telecommunications* - identify possible effects on telecommunications systems, assess impacts and mitigation measures including undertaking a full engineering assessment to examine the potential impacts as well as analysis and agreement on the implementation of suitable options to avoid potential disruptions to radio communication services; which may include the installation and maintenance of alternative sites;
- *Health* - consider and document health issues, focusing on neighbours with dwellings within 2 km of proposed wind turbines. Identify potential hazards and risks associated with electric and magnetic fields and demonstrate the application of the principles of Prudent Avoidance;
- *Bushfire* - identify potential hazards and risks associated with bushfires/use of bushfire prone land, including the risks that a wind farm will cause bush fire and any potential impacts on the aerial fighting of bush fires incorporating options to switch off turbines during bushfire, and demonstrating compliance with *Planning for Bush Fire Protection 2006*; and
- *Blade Throw* - assess blade throw risks.

Water Supply, Water Quality and Hydrology – the EIS must:

- identify water demand, and determine whether an adequate and secure water supply is available for the project;
- identify water sources (surface and groundwater), water disposal/discharge methods and water storage structures in the form of a water balance;
- include the statutory (licensing) context of the water supply sources;
- assess potential environmental impacts associated with the use of the identified water sources including impacts on groundwater and implications for existing licensed users/basic landholder rights;
- assess potential environmental impacts associated with any proposed discharges, and proposed monitoring methodology where required;
- assess the potential to intercept groundwater, including predicted dewatering volumes, zone of drawdown and associated impact, water quality and disposal

	methods; • where the project involves crossing or works within 40 metres of waterways, identify likely impacts to the waterways, how the waterways are proposed to be crossed and be designed in accordance with the <i>NSW Office of Water Guidelines for Controlled Activities</i> (2010); • describe the measures to minimise hydrological, water quality, aquatic and riparian impacts, including contingency requirements to address surface and groundwater impacts; and • identify how works within steep gradient land or highly erosive soil types will be managed during construction and operation, including in relation to access roads.
Consultation	During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: • Upper Lachlan Shire Council; • South East Local Land Services; • Local Aboriginal Land Council; • Office of Environment and Heritage; • Environment Protection Authority; • NSW Trade and Investment Department (Resources & Energy); • Department of Primary Industries (Catchments and Lands (Crown Lands), Fisheries NSW, Agriculture NSW, and NSW Office of Water); • NSW Roads and Maritime Services; • NSW Rural Fire Service; • Air Services Australia; • Civil Aviation Safety Authority; • Department of Defence; • NSW Government Telco Authority and other registered communications licensees (including emergency services); • Aerial Agricultural Society of Australia; • relevant service providers; • relevant minerals stakeholders (including exploration and mining title holders); and • the public, including community groups and adjoining and affected landowners (including "associated" and "non-associated" residences). The EIS must: • demonstrate effective consultation with stakeholders, and that the level of consultation with each stakeholder is commensurate with their degree of interest/concern or likely impact; • provide evidence of consultation with all neighbours with dwellings within 2 km of proposed wind turbines to identify any issues and potential approaches to mitigate any adverse impacts, including details of any written agreements; • clearly describe the consultation process undertaken for each stakeholder/group including details of the dates of consultation and copies of any information disseminated as part of the consultation process (subject to confidentiality); • describe the issues raised during consultation and how and where these have been addressed in the EIS; and • provide details of the status of the community consultative committee to be formed by the Applicant under the provisions of the <i>Draft NSW Planning Guidelines: Wind Farms</i> (as updated).
Further consultation after 2 years	If you do not lodge a development application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.

