



NSW GOVERNMENT  
**Department of Planning**

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Our ref: S06/01144

Mr Mark Sydney  
Pamada Pty Limited  
PO Box 1446  
DARLINGHURST NSW 1300

Dear Mr Sydney,

**Proposed Kyoto Energy Park, Scone, Upper Hunter Local Government Area (Application Reference: 06\_0055)**

I refer to your request for the Director-General's requirements for the preparation of an Environmental Assessment for the proposed energy park comprising of a Windfarm, Solar thermal facility and closed loop hydroelectric plant at Scone.

The Director-General's Environmental Assessment Requirements are attached, pursuant to section 75F (2) of the *Environmental Planning and Assessment Act 1979*. It should be noted that the Director-General's requirements have been prepared based on the information provided to date. Under section 75F (3) of the Act, the Director-General may alter or supplement these requirements if necessary and in light of any additional information that may be provided prior to the proponent seeking approval for the project.

If your proposal contains any actions that is likely to significantly impact matters of National Environmental Significance, it will require an additional approval under the *Commonwealth Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. It is your responsibility to contact the Department of Environment and Water Resources in Canberra (6274 1111 or <http://www.environment.gov.au>) to determine if the proposal is likely to significant impact on matters of National Environmental Significance, and would require an approval under the EPBC Act. The Commonwealth Government has accredited the NSW environmental assessment process for assessing any impacts on matters of National Environmental Significance. As a result, if it is determined that an approval is required under the EPBC Act, please contact the Department immediately as supplementary Director General's requirements will need to be issued.

You should ensure that you consult with the Department at least two weeks before you propose to submit the Environmental Assessment for the project to determine:

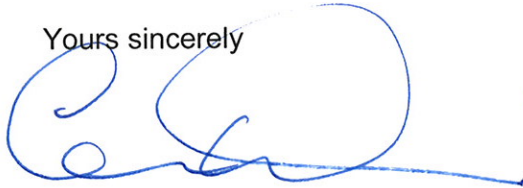
- the fees applicable to the application;
- whether the proposal requires an approval under the EPBC Act and any assessment obligations under that Act;
- consultation and public exhibition arrangements that will apply; and
- number and format (hard-copy or CD-ROM) of the Environmental Assessments that will be required.

As you may know, the Department will review the Environmental Assessment in consultation with the relevant authorities to determine if it adequately addresses the Director General's requirements. If the Director General considers the Environmental Assessment to be inadequate, you will be required to revise it prior to public exhibition.

The Director General's requirements will be placed on the Department's website along with other relevant information which becomes available during the assessment of the project. As a result, the Department would appreciate it if the documents submitted to the Department are in a suitable format for the web, and if you would arrange for an electronic version of the Environmental Assessment for the project to be hosted on a suitable website with a link the Department's website.

You should keep the contact officer for this project, Mark Turner ((02) 9228 6351, [mark.turner@planning.nsw.gov.au](mailto:mark.turner@planning.nsw.gov.au)), up to date with the progress of preparation of the Environmental Assessment, and seek clarification of any issues that may be unclear or may arise during this process.

Yours sincerely



1.5.07

Chris Wilson  
**Executive Director**  
**Major Project Assessments**  
As delegate for the Director-General

**PROPOSED KYOTO ENERGY PARK, SCONE, UPPER HUNTER LOCAL GOVERNMENT AREA**  
**ENVIRONMENTAL ASSESSMENT REQUIREMENTS UNDER PART 3A OF THE ENVIRONMENTAL**  
**PLANNING AND ASSESSMENT ACT 1979**

<b>Project</b>	Construction and operation of renewable power generation facilities at Scone. The project includes: <ol style="list-style-type: none"> <li>1. construction and operation of a windfarm comprising up to 47 turbines ranging from 2MW-4.5MW;</li> <li>2. construction and operation of solar thermal devices (panels/array) of approximately 1 square kilometre;</li> <li>3. construction and operation of a closed loop hydro-electric plant;</li> <li>4. construction of a managers residence, construction and operation of a visitor and education centre and associated facilities; and</li> <li>5. associated electricity transmission infrastructure including transmission lines, substation, energy storage devices and grid connection.</li> </ol>
<b>Site</b>	'Mountain' and 'Middlebrook' Stations approximately 10km-12km West/North West of Scone, Upper Hunter Local Government Area.
<b>Proponent</b>	Pamada Pty Limited
<b>Date of Issue</b>	1 May 2007
<b>Date of Expiration</b>	1 May 2009
<b>General Requirements</b>	The Environmental Assessment must be prepared to a high technical and scientific standard and must include: <ul style="list-style-type: none"> <li>• an executive summary and glossary;</li> <li>• a description of the proposal, including construction, operation and a timeline which clearly identifies the proposed commencement of construction and operation of the project components, their envisaged lifespan and arrangements for decommissioning and staging;</li> <li>• Assessment against the Department's draft <i>NSW Wind energy draft Environmental Impact Assessment Guidelines 2002</i>;</li> <li>• an assessment of the environmental impacts of the project, with particular focus on the key assessment requirements specified below;</li> <li>• justification for undertaking the project with consideration of the benefits and impacts of the proposal;</li> <li>• a draft Statement of Commitments detailing measures for environmental mitigation, management and monitoring for the project; and</li> <li>• certification by the author of the Environmental Assessment that the information contained in the Assessment is neither false nor misleading.</li> </ul>
<b>Key Assessment Requirements</b>	The Environmental Assessment must include assessment of the following key issues: <ul style="list-style-type: none"> <li>• <b>Strategic Justification (all project components)</b> - the Environmental Assessment must include a strategic assessment of the need, scale, scope and location for the project in relation to predicted electricity demand, predicted transmission constraints and the strategic direction of the region and the State in relation to electricity supply, demand and electricity generation technologies. It must also include a clear demonstration of quantified and substantiated greenhouse gas benefits, taking into consideration sources of electricity that could realistically be replaced and the extent of their replacement. The Environmental Assessment must also include a strategic planning consideration of the project and an analysis of the suitability of the proposed site with respect to potential land use conflicts particularly subdivision potential with existing and future surrounding land uses. With regards to the transmission line, the Environmental Assessment must clearly identify the proposed route and clearly describe the ownership, land use and zoning provisions for the land along the route.</li> <li>• <b>Noise Impacts (all project components)</b> - the Environmental Assessment must include a comprehensive assessment of the predicted noise impacts resulting from the construction and operation of the proposal. The assessment must include consideration of noise impacts of the project, with a particular focus on scenarios under which meteorological conditions characteristic of the locality may exacerbate impacts (such as the van den Berg effect for wind turbines) at sensitive receivers. The probability of such occurrences must be quantified. If any noise agreements with residents are proposed for areas where noise criteria cannot be met, sufficient information must be provided to</li> </ul>

enable a clear understanding of what has been agreed and what criteria have been used to frame any such agreements. The noise assessment must be undertaken in accordance with:

- *Wind Turbines* - The South Australian Environment Protection Authority's *Wind Farms -Environmental Noise Guidelines, 2003*;
- *Remaining Structures* - In accordance with the NSW EPA *Industrial Noise Policy, January 2000*;
- *Construction noise* - undertaken in accordance with Chapter 171 of the *Environmental Noise Control Manual (EPA, 2004)* for noise impacts associated with the proposal, particularly along the main access routes to the site;

The Environmental Assessment must clearly outline the noise mitigation, monitoring and management measures the Proponent intends to apply to the project. This must include an assessment of the feasibility, effectiveness and reliability of proposed measures and any residual impacts after these measures have been implemented.

- **Heritage Impacts (all components including transmission line)** - the Environmental Assessment must identify indigenous and non-indigenous cultural, archaeological and built heritage issues/items, the potential impacts activities associated with the project will have on these and proposed mitigation measures. The Environmental Assessment must include an Archaeological Assessment, Methodology and Research Design for any proposed archaeological monitoring, in consultation with the NSW Heritage Office, Aboriginal Community and DEC in accordance with the Department of Environment and Conservation's draft *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*.
- **Visual Amenity Impacts (all components)** - the Environmental Assessment must fully describe all project components, locations and dimensions including wind turbines, solar thermal/array, visitor centre, transmission lines, substations etc. A photographic assessment clearly demonstrating the potential visual amenity impacts of the proposal must be provided along with clear description of visual amenity mitigation and management measures that the Proponent intends to apply to the project. An assessment of the feasibility, effectiveness and reliability of proposed measures and any residual impacts after these measures have been implemented must be included in this regard with a 'zone of visual influence map' provided covering the towns of Scone and Aberdeen. The Environmental Assessment must specifically address the following matters with respect to individual project components:
  - Solar Thermal/Solar Voltaic Array - the Environmental Assessment should provide an analysis of reflectivity on surrounding residents;
  - Visitors Centre – the Environmental Assessment must identify that the height, scale and lighting of the building responds and contributes to its context and that the design has an appropriate scale of built form (including roof form and building height);
  - Transmission Line/Grid Connection - the Environmental Assessment must describe the proposed corridors, likely route alignments and location of energy storage devices, proximity to other infrastructure and urban and rural residential development;
  - Wind Turbines - the Environmental Assessment must assess the visual impact of the proposal on this landscape (including existing and approved dwellings) for a distance of at least 10 kilometres from the turbines, taking into consideration the impact of shadow "flicker" and blade "glint". The visual impact assessment should be prepared with regard to the Australian Wind Energy Association and Australian Council of National Trust's *Wind Farms and Landscape Values: Stage 1 Final Report - Identifying Issues, March 2005*, Appendix B: *Wind Farms and Landscape Values: Final Issues Paper*.
- **Flora and Fauna (all components)** - the Environmental Assessment must include a flora and fauna impact assessment identifying and considering any critical habitats, threatened species, populations or ecological communities listed under both State and Commonwealth legislation recorded on the site, along the transmission line route or the surrounding area. The Environmental Assessment must also detail measures to avoid or mitigate impacts associated with the siting and construction of any access roads and other infrastructure. Additionally it must address:
  - the impact of the proposal on birds and bats from strikes and alteration to movement patterns resulting from the turbines and transmission lines. An outline of an adaptive management program must be included;
  - vegetation clearing during construction and maintenance, including details on the location, composition and quantity and likelihood of disturbance to the White Box

	<p>Yellow Box Blakely's Red Gum Woodland (Endangered Ecological Community);</p> <ul style="list-style-type: none"> <li>→ identification of any regional corridors; and</li> <li>→ an assessment of any potential impacts associated with the proposal on the Towarri National Park and the Hunter-Central Rivers Catchment Action Plan;</li> </ul> <p>The flora and fauna assessment must be prepared in accordance with the Departments of Environment and Conservation and Primary Industries' draft <i>Guidelines for Threatened Species Assessment</i>, Auswind's <i>Wind Farms and Birds: Interim Standards for Risk Assessment</i>, July 2005 and have regard to the Commonwealth Department of Environment and Heritage's <i>Cumulative Risk for Threatened and Migratory Species</i>, March 2006.</p> <ul style="list-style-type: none"> <li>• <b>Water Quantity and Quality Impacts</b> - the Environmental Assessment must include an assessment of the water quantity and quality impacts of the proposal (including on stream and drainage lines), with particular reference to the water needs of the project, the proposed source of water, and the implementation of water saving measures (including use of treated effluent or rainwater)</li> <li>• <b>Bushfire Risk</b>- the site is identified as bush fire prone land and the Environmental Assessment must meet requirements of <i>Planning for Bush Fire Protection 2006</i> by complying with standards regarding setbacks, provision of water supply, access, supply of services, fuel management and evacuation planning in consultation with the NSW Rural Fire Service and Upper Hunter Council.</li> <li>• <b>Infrastructure and Services</b> – the Environmental Assessment must assess the potential impact of the proposal on telecommunications, aircraft and electric and magnetic fields. In reference to aircraft, the assessment must consider any impacts on the operation of Scone Airport and private landing fields and any restrictions on aerial spraying and emergency landing capabilities arising from the project in addition to the Civil Aviation Safety Authority's draft advisory circular AC 139-18(0) <i>Obstacle Marking and Lighting of Wind Farms</i>, December 2005. Consideration of electric and magnetic fields must address potential impacts and the means of minimising such impacts. A demonstration of compliance with 'prudent avoidance principles' should be provided, and consideration given to the ARPANSA draft <i>Radiation Protection Standard for exposure limits to Electric and Magnetic Fields</i> (or more recent update).</li> <li>• <b>Geotechnical and Resource Issues</b> - the Environmental Assessment must consider the presence of mineral/gas and gravel resources and the potential impact the project may have with respect to mining/ extraction potential and land sterilisation.</li> <li>• <b>General Environmental Risk Analysis</b> – notwithstanding the above key assessment requirements, the Environmental Assessment must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of the additional key environmental impact(s) must be included in the Environmental Assessment.</li> </ul>
<p><b>Consultation Requirements</b></p>	<p>You must undertake an appropriate and justified level of consultation with the following parties during the preparation of the Environmental Assessment:</p> <ul style="list-style-type: none"> <li>• Department of Environment and Conservation;</li> <li>• Roads and Traffic Authority;</li> <li>• Department of Primary Industries (Minerals, Fisheries and Agriculture);</li> <li>• Department of Natural Resources;</li> <li>• Hunter-Central Rivers Catchment Management Authority;</li> <li>• Upper Hunter Council;</li> <li>• EnergyAustralia/TransGrid;</li> <li>• NSW Rural Fire Service;</li> <li>• Civil Aviation Safety Authority (CASA);</li> <li>• Woonarua Local Aboriginal Land Council; and</li> <li>• the local community.</li> </ul> <p>The Environmental Assessment must clearly describe the consultation process and indicate the issues raised by stakeholders during consultation and how these matters have been addressed.</p>
<p><b>Deemed refusal period</b></p>	<p>Under clause 8E(2) of the <i>Environmental Planning and Assessment Regulation 2000</i>, the applicable deemed refusal period is 60 days from the end of the Proponent's environmental assessment period for the project.</p>