

# APPENDIX A DIRECTOR GENERAL'S REQUIREMENTS



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Mr Doug Landfear  
Level 22  
101 Miller Street  
NORTH SYDNEY NSW 2060

Our ref.: 12/10541

Dear Mr Landfear

**DGRs for Nyngan Solar Plant (Application Reference: SSD-5355)**

The Department has reviewed your request for Director General's environmental assessment requirements (DGRs) for the above development.

I have attached a copy of the DGRs for the preparation of an Environmental Impact Statement (EIS) for the development. These requirements have been prepared in consultation with relevant government authorities. I have also attached a copy of the government authorities' comments for your information.

The DGRs have been prepared based on the information you have provided to date. Please note that under Clause 3(5) of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*, the Director-General may alter these requirements at any time. If you do not lodge a DA and EIS for the development within 2 years, you will need to consult the Director-General.

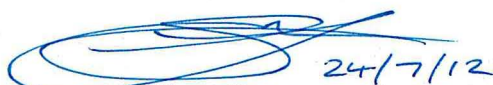
Prior to exhibiting the EIS that you submit for the development, the Department will review the document to determine if it addresses the DGRs. The Department may consult with other relevant government authorities in making this decision. Please provide 6 hard copies and 6 electronic copies of the EIS to assist this review.

If the Department considers that the EIS does not address the requirements in the DGRs, you may be required to submit an amended EIS. Once the Department is satisfied that the requirements have been addressed, you will be contacted regarding arrangements for public exhibition.

If your development is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Department of Sustainability, Environment, Water, Population and Communities to determine if an approval under the EPBC Act is required for your development (<http://www.environment.gov.au> or 6274 1111).

Your contact officer for this proposal, Mr James Archdale, can be contacted on 9228-6236 or via email at James.Archdale@planning.nsw.gov.au. Please mark all correspondence regarding the proposal to the attention of the contact officer.

Yours sincerely



Glenn Snow  
A/Director  
Infrastructure Projects



# Director General'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*

<b>Application Number</b>	SSD-5355
<b>Development</b>	<b>Nyngan Solar Plant</b> The construction and operation of up to a 106MW solar PV plant at Nyngan and associated infrastructure including an approximately 3km long 132kV transmission line to connect to the existing electrical network.
<b>Location</b>	Located in Central West NSW, approximately 10km west of the Nyngan township within Bogan Shire LGA. The development site is located on a land parcel north of the Barrier Highway (Lot 34, DP 751328). The proposed transmission line would traverse four parcels of land including two private rural land holdings (Lot 24 DP 751328 and Lot 8 DP 724628), one Crown Land parcel (Lot 7300 DP 1156652) and the Barrier Highway Road Reserve.
<b>Proponent</b>	AGL
<b>Date of Issue</b>	24 July 2012
<b>General Requirements</b>	<p>The Environmental Impact Statement (EIS) must be prepared in accordance with, and meet the minimum requirements of, Part 3 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the EP&amp;A Regulation) and include the following:</p> <ol style="list-style-type: none"> <li>1. the information required under clause 6, including but not limited to:                     <ul style="list-style-type: none"> <li>• the description of the development for both the solar farm and transmission line should include:                             <ul style="list-style-type: none"> <li>→ construction, operation and decommissioning (including rehabilitation) details;</li> <li>→ a site plan at an adequate scale with dimensions, showing the developments location, orientation, site coverage, access roads and entrances to public roads;</li> <li>→ the location and dimensions of all development components including the solar module array, underground and above ground cabling, electrical substation and transmission line linking the solar farm to the substation, fencing and landscaping around the solar farm, on-site office, operations and maintenance buildings; temporary construction infrastructure and compounds, and access roads/road upgrades (including access tracks);</li> <li>→ a timeline identifying the development's proposed construction and operation components, their envisaged lifespan and arrangements for decommissioning and staging;</li> <li>→ supporting maps/plans clearly identifying existing environmental features (e.g. watercourses, vegetation), infrastructure and land use (including nearby residences and approved residential developments or subdivisions) and the location/ siting of the development (including associated infrastructure) in the context of this existing environment; and</li> <li>→ resourcing requirements (including, but not limited to, water supply (including water demands, surface and groundwater sources, and overall water balance) and gravel).</li> </ul> </li> </ul> </li> <li>2. the content listed in clause 7, including, but not limited to:                     <ul style="list-style-type: none"> <li>• a summary of the EIS,</li> <li>• a statement of the objectives of the development, including a description of the strategic need, justification, objectives and outcomes. This should</li> </ul> </li> </ol>



	<p>include:</p> <ul style="list-style-type: none"> <li>→ a strategic assessment of the need, scale, scope and location for the development 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, and its role within the Commonwealth's Renewable Energy Target Scheme and the Solar Flagships Program;</li> <li>→ 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;</li> <li>• an analysis of feasible alternatives to the carrying out of the development, having regard to its objectives, 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. This should include: <ul style="list-style-type: none"> <li>→ an analysis of the suitability of the development with respect to potential land use conflicts with existing and future surrounding land uses (including rural residential development, land of significant scenic or visual value, land of high agricultural value, mineral reserves including existing mineral exploration operations within the proximity of the subject area, Crown land, forestry and conservation areas), taking into account local and strategic land use objectives including the potential loss of agricultural land and the impact on the local community; and</li> <li>→ describe the alternatives considered (location and/or design) for all development components, and provide justification for the preferred development demonstrating its benefits including community benefits (for example community enhancement programmes) on a local and strategic scale and how it achieves stated objectives.</li> </ul> </li> <li>• an analysis of the development, including an assessment, with a particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of the EP&amp;A Regulation (where relevant),</li> <li>• 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&amp;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 in accordance with SEPP 55.</li> <li>• a compilation of the measures proposed to mitigate any adverse effects of the development on the environment,</li> <li>• a justification for the development taking into consideration the objects of the EP&amp;A Act, and</li> <li>• detail how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the development.</li> </ul>
<p><b>Key issues</b></p>	<p>The EIS must address the following specific matters for both the solar farm and transmission line:</p> <ul style="list-style-type: none"> <li>• <b>Flora and Fauna</b> - the EIS must: <ul style="list-style-type: none"> <li>→ include an assessment of the impacts of all development components on flora and fauna (both terrestrial and aquatic, as relevant) and their habitat, including details on the existing site conditions and likelihood of disturbance (including quantifying the worst case extent of impact on the basis of vegetation type and total</li> </ul> </li> </ul>



	<p>native vegetation disturbed);</p> <ul style="list-style-type: none"> <li>→ specifically consider impacts on threatened species and ecological communities listed under both State and Commonwealth legislation that have the potential to occur on the site and surrounding land, impacts on riparian and/ or instream habitat in the case of disturbance of waterways, and on biodiversity corridors;</li> <li>→ include details of how flora and fauna impacts would be managed during construction and operation including adaptive management and maintenance protocols (including the mitigation and/or management of weeds);</li> <li>→ include measures to avoid, mitigate or offset impacts consistent with “improve or maintain” principles. Sufficient details must be provided to demonstrate the availability of viable and achievable options to offset the impacts of the development, if required; and</li> <li>→ take into account: <ul style="list-style-type: none"> <li>○ the <i>Threatened Species Assessment Guidelines</i> (DECC, 2007),</li> <li>○ the <i>Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities</i> (DEC, 2004), and</li> <li>○ the <i>Central West Catchment Action Plan</i> (Central West CMA 2007).</li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>• <b>Visual Impacts</b> - the EIS must: <ul style="list-style-type: none"> <li>→ provide an assessment of the landscape character and values and any scenic or significant vistas of the area potentially affected by the development. This should describe community and stakeholder values of the local and regional visual amenity and quality, and perceptions of the development based on surveys and consultation;</li> <li>→ include a full assessment of the visual impacts associated with the solar farm, including identification and documentation of all key viewing points and corridors particularly from identified sensitive lands. This should also include the associated transmission line. Alternative pole designs should be presented and assessed and the potential for undergrounding in sensitive locations should also be assessed;</li> <li>→ provide an assessment of the potential for reflectivity from the panels and associated infrastructure, and any safety impacts for motorists or aircraft;</li> <li>→ include photomontages of the development taken from potentially affected residences (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 solar farm; and</li> <li>→ provide an assessment of the feasibility, effectiveness and reliability of proposed mitigation measures and any residual impacts after these measures have been implemented.</li> </ul> </li> <li>• <b>Noise Impacts</b> - the EIS must: <ul style="list-style-type: none"> <li>→ include a noise assessment of all phases and components of the development including, but not limited to, construction noise (focusing on high noise-generating activities and any works proposed outside of standard construction hours, traffic noise, vibration generating activities), and the operation of the electrical substation and aeolian/corona noise from the transmission line. 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 (eg. tonality, impulsiveness etc.) generated by noise sources, noise/vibration criteria, modelling assumptions and worst case and representative noise/vibration impacts;</li> </ul> </li> </ul>
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- include monitoring to ensure that there is adequate 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 if there are noise generating activities at night; and
- clearly outline the noise mitigation, monitoring and management measures that would be applied to the development. This must include an assessment of the feasibility, effectiveness and reliability of proposed measures and any residual impacts after these measures have been incorporated.

The assessment must take into account the following guidelines (as relevant):

- 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)
- **Heritage** – the EIS must include an assessment of impacts on Aboriginal heritage. The EIS must demonstrate the likely impacts of the development to Aboriginal heritage (including cultural and archaeological significance). Where impacts are identified the assessment shall:
    - outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures) generally consistent with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005);
    - be undertaken by a suitably qualified heritage consultant(s);
    - demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and developing and selecting options and mitigation measures (including the final proposed measures); and
    - demonstrate that an appropriate archaeological assessment methodology, including research design (where relevant) has been undertaken, to guide physical archaeological test excavations of areas of potential archaeological deposits. The full spatial extent and significance of any archaeological evidence shall be established and results of excavations included.
  - **Traffic and Transport** – the EIS must assess the construction and operational traffic impacts of the development including:
    - details of the nature of traffic generated, transport routes, traffic volumes and potential impacts on local and regional roads (including impacts on the structural integrity of the road network), bridges and intersections, including any proposed road upgrades and repairs;
    - details of measures to mitigate and/or manage the potential impacts, including measures to control soil erosion and dust generated by traffic volumes; and
    - details of site access roads including how these would connect to the existing road network and any operational maintenance or handover requirements.
  - **Hazard/Risks** – the EIS must include an assessment of potential hazards and risks associated with electric and magnetic fields (EMFs) (with reference to Australian Radiation Protection and Nuclear Safety Agency standards) and bushfires. The EIS should demonstrate the application of



	<p>the Principles of Prudent Avoidance in relation to EMFs. The EIS must also detail measures to contain any hazardous substances to prevent the contamination of pasture and dams.</p> <ul style="list-style-type: none"> <li>• <b>Water Quality, Waterways and Flooding</b> – The EIS must identify likely impacts to waterways and measures to minimise impacts. Details of the design of waterway crossings where such crossings are to be located in third order or higher streams are to be provided. The EIS must also address soil erosion issues (construction and operation) and the potential for clearing to create salinity risks. The EIS must take into account: <ul style="list-style-type: none"> <li>→ <i>Managing Urban Stormwater: Soils and Construction, Volume 1, 4th edition</i> (Landcom 2004),</li> <li>→ <i>Managing Urban Stormwater Soils and Construction, Volume 2A, Installation of Services and 2C Unsealed Roads</i> (DECC 2008), and</li> <li>→ <i>National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (ANZECC 2000).</li> </ul> </li> </ul> <p>The EIS must include appropriate assessment of impact on adjacent licensed water users (surface and groundwater), riparian ecosystems and groundwater-dependent ecosystems.</p> <p>The EIS must include an appropriate assessment of potential flooding impacts, undertaken generally in accordance with the principles, processes and guidelines as outlined in the NSW Government <i>Floodplain Development Manual, 2005</i>. The study shall consider a full range of potential flood events up to and including the Probable Maximum Flood (PMF) and any local floodplain risk management planning processes.</p>
<b>Environmental Risk Analysis</b>	<p><b>General Environmental Risk Analysis</b> – notwithstanding the key assessment requirements, the EIS must include an environmental risk analysis to identify potential environmental impacts associated with the development, 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 EIS.</p>
<b>Consultation</b>	<p>The Proponent must undertake a consultation program as part of the environmental assessment process, including consultation with, but not necessarily limited to, the following parties:</p> <ul style="list-style-type: none"> <li>• Bogan Shire Council;</li> <li>• Central West Catchment Management Authority;</li> <li>• Local Aboriginal Land Council;</li> <li>• Office of Environment and Heritage and Environment Protection Authority;</li> <li>• NSW Trade and Investment (Department of Primary Industries, Catchments and Lands, and NSW Office of Water);</li> <li>• NSW Roads and Maritime Services;</li> <li>• NSW Rural Fire Service;</li> <li>• TransGrid;</li> <li>• relevant minerals stakeholders (including exploration and mining title holders); and</li> <li>• the local community and landowners.</li> </ul> <p>The consultation process shall include measures for disseminating information to increase awareness of the development as well as methods for actively engaging stakeholders on issues that would be of interest/concern to them. The EIS must:</p> <p>→ demonstrate effective consultation with stakeholders, and that the level of</p>

	<p>consultation with each stakeholder is commensurate with their degree of interest/concern or likely impact;</p> <p>→ 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); and</p> <p>→ describe the issues raised during consultation and how and where these have been addressed in the EIS.</p>
<b>Further consultation after 2 years</b>	<p>If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the requirements for lodgement.</p>