**Chapter 1** 

### **Introduction - Summary of Key Outcomes**

Over the next decade, it is predicted that rising electricity demand from the whole of NSW along with a change in the mix of generation sources as a result of the expansion of Renewable Energy Targets (RET) will substantially increase the need for rapid response "peaking" power generation within NSW. To meet this rapidly changing electricity supply landscape, AGL proposes to construct and operate a gas turbine power station with a nominal generating capacity of up to 1500 megawatts (MW) at a site near Dalton (known as the Site), south western NSW (known as the Dalton Power Project). The Dalton Power Project would be able to supply electricity during times of peak demand.

The Dalton Power Project would be constructed in two stages, and would have a total nominal generating capacity of up to 1500 MW. AGL are seeking approval for both stages of the Project as part of this current Project Application.

Stage 1 would include the installation of gas turbine units with a generating capacity of between 250 MW and 780 MW with Stage 2 increasing the total number of units and output to a nominal capacity of 1500 MW. For Stage 1, these turbines would either consist of between two to four "E" class turbines, with a nominal capacity of between 125 MW and 200 MW each run in open cycle mode, or two to three "F" class units with a nominal generation capacity of between 200 MW and 320 MW. Stage 2 would result in the construction of remaining turbines up to a total generating capacity on site of 1500 MW. Completion of both stages would result in a maximum of six turbine units within the proposed Site.

The Facility footprint would be constructed and operated on an area of approximately 26 hectares (ha) within a larger Site greater than 500 ha), thereby providing significant capacity for buffer zones.

The project cost is estimated to be between \$250 million to \$750 million for Stage 1, and the total project (i.e., Stage 1 and 2) consisting of up to six turbines would incur a project cost expected to be in the region of \$1.5 billion.

Gas turbines burning natural gas would be installed on the Site and would typically operate for 15 % of each year, with the potential for more extended operation. AGL is a major retailer of gas and electricity in Australia with an extensive portfolio of energy assets. The objective of the Dalton Power Project is to generate electricity generally at peak times. The Dalton Power Project would assist in the management of risks and costs to delivering electricity to AGL's retail, commercial and industrial customers while ensuring acceptable environmental and social outcomes are delivered. The Minister for Planning is the consent authority for the Dalton Power Project as determined by the relevant legislation. This Environmental Assessment meets all legislative requirements and provides the Minister for Planning with the required information to determine the environmental impacts and benefits of the Dalton Power Project.

Submissions received during the public exhibition period will be provided to AGL who will prepare a response. The Department of Planning and Infrastructure will prepare an assessment report for the Minister for Planning who will determine whether to grant Project Approval.



Chapter 1 Int

Introduction

### 1.1 Background

Over the next decade, New South Wales (NSW) will experience growth in peak electricity demand that will exceed existing generation capacity. NSW is the largest region of the National Electricity Market (NEM) in terms of capacity and demand for energy and is also experiencing the strongest demand growth.

To meet the rising peak electricity demand, AGL proposes the construction and operation of a two stage gas turbine power station with a total generation capacity of up to 1500 MW. This proposal near Dalton in NSW is referred to as the Dalton Power Project (or the Project). The elements of the Dalton Power Project would include the proposed power station consisting of up to six gas turbine units; a 3 km lateral gas pipeline connection from the power station to an existing natural gas supply pipeline located to the south of the Site; and a connection between the power station and the existing high voltage transmission system on Site.

### 1.2 Project Outline

The Dalton Power Project would be constructed over two stages, resulting in a maximum installation of six turbines with a generating capacity of up to 1500 MW. Stage 1 would initially result in the construction of a gas turbine power station with a nominal generation capacity of between 250 and 780 MW. The first stage would consist of the installation of two to four "E" class turbines, or two to three "F" class units. Each "E" class turbine would have a capacity of between 125 and 200 MW each run in open cycle mode, and each "F" class turbine would have a nominal generation capacity range between 200 and 320 MW.

At a later stage (likely to be initiated by the proposed upgrade by TransGrid of the 330 kV transmission line from the Bannaby substation to Yass), Stage 2 of the Project would involve the incorporation of additional open cycle gas turbine units into the power station to bring the maximum number of turbines to six, and the total maximum generating capacity to 1500 MW for the complete Dalton Power Project. It is envisaged that the power station would operate in open cycle mode during times of peak electricity demand, typically for less than 15 % of the year.

The site is located at Dalton, north west of Gunning in south western New South Wales (NSW) (refer to **Figures 1-1 and 1-2**). The Dalton Power Project would be constructed and operated within a 26 ha footprint within a larger area greater than 500 ha.

The power station would use natural gas supplied to the facility by a lateral gas pipeline which would extend from the existing Moomba to Sydney Gas Pipeline located to the south of the Site (refer to **Figure 1-2**). The proposed pipeline would be approximately 3 km in length to the edge of the Facility footprint, and would require a new valve station connection point to the existing gas pipeline. The proposed valve station would have aboveground facilities located in a fenced yard and would occupy an area in the order of 0.22 ha (refer to **Figure 1-2**). In addition, an underground service trench and access track easement would extend to a Communications Tower and Communications Hut to be located approximately 1.5 km to the east of the Facility (refer to **Figure 1-2**).





0 20 40 kilometres Map compiled Australia do m the basis that	Using MapInfo StreetPro data. © 2011 MapInfo Australia Pty Ltd and PSM. ot warrant the accuracy or completeness of information in this publication a these companies shall bear no responsibility or liability whatsoever for any	A Australia Ltd. URS Australia, MapInfo Australia or PSMA nd any person using or relying upon such information does so on errors, faults, defects or omissions in the information.
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2.5			
1.5	Legend		
4 4	AGL Site Boundary		
Sec. 1	Project Approval Boundaries		
	Communications Tower and Hut Footprint		
	Communications Tower Services		
IT ALL S	Gas Pipeline (northern) and Access Road		
	Gas Pipeline (southern)		
	Communications Tower Services		
AL AS	Valve Station		
	Waterway		
	Moomba-Sydney Pipeline		
ide	AGL Owned Land		
•	Riverview		
	Holmes		
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**Chapter 1** 

### 1.3 **Project Objectives**

The key objectives of the Dalton Power Project are as follows:

#### **Operational/Functional**

- Provide electricity at short notice during periods of peak demand or high wholesale electricity price.
- Minimise transmission line losses and potential for overloads.
- Improve electricity network reliability.
- Complement intermittent renewable generation sources.

#### Economic

- Manage wholesale electricity risks and costs associated with AGL's retail customer base.
- Improve competitiveness by removing margins that would normally be paid to third party suppliers.

#### Environmental and Social

- Provide electricity with relatively low greenhouse gas emissions and acceptable environmental outcomes.
- Provide electricity where land zoning is compatible for the power station development and where adequate separation from sensitive neighbours, such as residential housing, exists.

### 1.4 The Proponent

The Proponent of the Dalton Power Project is AGL Energy Ltd (AGL). AGL has been a major participant in the Australian energy industry since 1837. It began as a privately-owned gas utility in NSW and since then has built an extensive energy business across Australia. Today AGL is a major retailer of gas and electricity to over three million customers. AGL has an extensive portfolio of wholly and partly-owned investments in energy infrastructure, infrastructure management and other energy companies.

AGL's business involves:

- buying and selling gas and electricity from gas producers and electricity generators;
- owning and investing in power generation plants, gas fields, renewable energy facilities; and
- providing customers with a wide range of energy products and services.



Introduction

### 1.5 Environmental Assessment Process

The Dalton Power Project is subject to the development and assessment processes and requirements of Part 3A of the EP&A Act. A Project Application was accepted by the Department of Planning and Infrastructure (formerly Department of Planning) on 25 March 2010 including an updated supporting Preliminary Environmental Assessment. On 19 April 2010 the Director-General issued Environmental Assessment Requirements.

The Project also triggers the Commonwealth EPBC Act. The potential impacts to Endangered Ecological Communities were the focus of an EPBC referral submitted for determination by the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities. On 15 June 2010, the Project was determined to be a Controlled Action by the Minister for Sustainability, Environment, Water, Population and Communities. (EPBC 2010/5484). Supplementary Director-General Requirements for the Project were provided on 5 July 2010. Department of Planning and Infrastructure confirmed that the interim procedures in relation to an accredited assessment process will apply to the assessment of this project under the EPBC Act so that the Department of Planning and Infrastructure can undertake an environmental impact assessment of the project to satisfy the requirements of both NSW and Commonwealth legislation.

Refer to Appendix A for the D-G's Environmental Assessment Requirements.

A flow diagram of the assessment and approvals process under the EP&A and EPBC Acts is shown in **Figure 1-3**.



**Chapter 1** 

#### Figure 1-3 Approvals Process under Part 3A of EP&A Act 1979 / EPBC Act 1999



Introduction

### 1.5.1 Definitions

For the purposes of the Environmental Assessment, the following definitions apply:

- **Dalton Power Project or Project:** construction and operation by AGL of a two stage gas turbine power station with a maximum generation capacity of 1500 MW. The development of ancillary infrastructure for the power station is also included. The Project would be located at a site to the north of Dalton, NSW. The Project would be constructed over two stages, with Stage 1 resulting in the construction of a power station with a generating capacity of between 250 and 780 MW, and Stage 2 incorporating additional generation capacity to a maximum of up to 1500 MW.
- **Facility:** gas turbine power station comprising up to six turbines with a total generation capacity of 1500 MW.
- Site: collectively refers to the property comprising "The Elms" Lot 115, 249, 252, 253, 305, 307 in DP754111; "Holmes" Lot 14, 183, 184, 187, 200, 283, 306 in DP 754111, and "Riverview" Lot 116, 321, 322, 162, 317, 318 in DP754111.
- AGL Owned Lands: AGL has purchased 573 ha, this includes the Site and Lots 21,186 and 251 in DP754111 through which the gas pipeline (northern portion) and access road traverse, also parts of Lot 30 and 31 DP754111, which would contain the valve station and through which the gas pipeline (southern portion) traverses. It is noted that the lots beyond the Site (other than the infrastructure footprint within these lots) have not been included in this assessment.
   Development Footprint: area within the wider 508 ha Site to be developed for the power station and associated infrastructure.
- Access Road: new road to be constructed to provide access to the Facility. The access road would extend approximately 1.9 km north east from Walshs Road at the point where Walshs Road takes a 90-degree turn west.
- **Gas Pipeline:** proposed lateral gas pipeline extension connecting the Facility to the existing Moomba to Sydney Gas Pipeline. The underground gas pipeline would be incorporated into the proposed access road easement within the northern portion, and would be located within the existing reserve of Walshs Road within the southern portion.

### 1.6 Environmental Assessment Preparation and Exhibition

The Environmental Assessment has been prepared in accordance with Part 3A of the EP&A Act and the Director-General's Environmental Assessment Requirements.



**Chapter 1** 

The objectives of the Environmental Assessment are:

- to comply with the requirements of the EP&A Act, as formalised in the Director-General's Environmental Assessment Requirements;
- to concurrently comply with the requirements of the EPBC Act, as formalised in the Supplementary Director-General's Environmental Assessment Requirements;
- to provide the NSW Minister for Planning and Infrastructure with sufficient information to determine the environmental impacts and benefits of the Dalton Power Project;
- to provide the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities with sufficient information to determine the environmental impacts and benefits of the Dalton Power Project; and
- to inform the community about the Dalton Power Project.

The EP&A Act requires that the Environmental Assessment be placed on exhibition for public review for a minimum period of 30 days.

#### 1.6.1 Decisions and Assessments

Subsequent to exhibition of the Environmental Assessment, copies of all submissions or a report of all issues raised would be provided to AGL and relevant Government authorities. AGL would review the submissions and consider and respond to issues raised.

The Director-General would prepare an assessment report on the Project which would take into account comments from relevant Government authorities as well as other stakeholders and the community. The assessment report will be provided to the Minister for Planning who would determine whether to grant Project Approval and specify the conditions under which the Project would operate in accordance with the EP&A Act.

#### 1.6.2 Key Assessment Requirements

The Director-General's Environmental Assessment Requirements identified specific issues to be addressed in the Environmental Assessment. These comprised the review and assessment of:

- greenhouse gases;
- air quality impacts;
- water quantity and quality;
- noise impacts;

- indigenous heritage;
- hazard and risks;
- visual impacts; and
- traffic and transport.

• flora and fauna impacts;



Introduction

These key issues have been addressed by specialist investigations commissioned for the Project. The resulting technical assessments have been used as source materials for this Environmental Assessment and are submitted as components of this Project Application. Detailed technical studies are presented in **Volume 2 Appendices (Part 1 and 2)** and summarised within the relevant sections of this main report. In other instances, the whole assessment forms the relevant section of this main document (**Volume 1**).

### 1.6.3 General Environmental Risk

The Environmental Assessment Requirements state that the Environmental Assessment must consider environmental risks that may lead to potential environmental impacts associated with the Project. Further to the issues listed in **Section 1.6.2** above, additional issues that were considered relevant to this Project included soils, geology and groundwater.

Environmental risk is further discussed in Chapter 7.

### 1.7 Environmental Assessment Document Structure

The Environmental Assessment document is divided into a number of parts. The content of each part is outlined below:

#### Volume 1 Main Document

- **Executive Summary** This provides a brief description of the key issues and findings detailed in the other parts of the Environmental Assessment.
- Part A: Project Description Chapter 1 briefly outlines the environmental impact assessment process, describes the background and context to the Project and provides an outline of the proposal. Chapters 2 to 4 detail the needs, objectives and alternatives for the development and provides a detailed description of the proposed Project. Chapter 5 includes the relevant controlling Commonwealth and State legislation, and nominates the various licences and approvals required to enable the Project to proceed. Chapter 6 summarises the issues raised during consultation with statutory and other relevant authorities as well as the local community. The issues raised during the consultation process are cross referenced throughout the proceeding sections of the Environmental Assessment. Chapter 7 provides a discussion on the environmental risks of the Project.
- **Part B: Environmental Assessment Chapters 8-18** provide an overview of the existing environment, an assessment of the likely impacts of the proposal and the identification of appropriate mitigation measures to safeguard the environment.
- Part C Commitments and Conclusion
  - Draft Statement of Commitments Chapter 19 outlines AGL's commitment to proposed environmental management measures to safeguard against any potential impacts, as well as commitments around ongoing project monitoring.



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- Conclusion Chapter 20 addresses the principles of Ecologically Sustainable Development (ESD) and provides justification for the proposed Project.
- References Chapter 21 provides a list of materials referenced during preparation of the Environmental Assessment.
- Volume 2 Appendices (Part 1 and 2) This part contains stakeholder correspondence as well as the detailed technical assessments conducted for the Environmental Assessment.

**Table 1-1** provides an evaluation of the Director-General's Environmental Assessment Requirements (referred to as DGRs) as addressed within this Environmental Assessment and the location within the document. Supplementary DGRs for the Project were provided by the Federal Environment Minister on 5 July 2010 in relation to the concurrent EPBC Act project approval (EPBC 2010/5484). An evaluation of the Environmental Assessment against these supplementary requirements is presented in **Table 1-2**.

# Table 1-1NSW Department of Planning (now Department of Planning and Infrastructure)Director General's Requirements

Requirement	Description	Chapter / Section of Environmental Assessment
General Require	ments	
The Environmenta	al Assessment (EA) must include:	
	An executive summary	Separate Executive Summary provided at beginning of document.
	<ul> <li>A description of the Project including construction, operation and staging. The description should include any required infrastructure such as pipelines and connection to the grid for the operation of the Project</li> </ul>	Chapter 4 - Project Description.
	• Consideration of any relevant statutory provisions including the consistency of the Project with the objects of the <i>Environmental Planning and Assessment Act 1979</i>	Chapter 5 - Statutory Planning and in Chapter 20 – Conclusion.
	Consideration of alternatives to the project, including site selection	Chapter 3 - Alternatives to the Proposal.
	<ul> <li>An assessment of the environmental impacts of the project with particular focus on the key assessment requirements specified below and proposed mitigation / management measures for residual environmental impacts</li> </ul>	Throughout the Environmental Assessment, specifically through chapters 7 to 18.
	<ul> <li>Justification for undertaking the project with consideration of the benefits / impacts of the proposal (including community benefits) and proposed management / mitigation / monitoring</li> </ul>	Chapter 2 - Project Need and Justification, and throughout chapters 7 through to 18.
	<ul> <li>A Draft Statement of Commitments outlining environmental management, mitigation and monitoring measures</li> </ul>	Chapter 19 - Statement of Commitments.
	<ul> <li>Certification by the author of the Environmental Assessment that the information contained in the assessment is neither false nor misleading</li> </ul>	Statement of Validity included as front page within this document.

Requirement	Description	Chapter / Section of Environmental Assessment			
Key Assessment Requirements					
Strategic Justification	Strategic assessment of the need, scale, scope, operational mode (eg. baseload, intermediate, peaking) and location for the project in relation to predicted electricity demand, transmission constraints and the strategic direction of the region and the State in relation to electricity supply, demand and electricity generation technologies	Chapter 2 - Project Need and Justification, Chapter 3 - Alternatives to the Proposal.			
	Analysis of site suitability with respect to potential land use conflicts with existing and future land uses taking into account local and strategic land use objectives	Chapter 3 – Alternatives to the Proposal. Chapter 5 – Statutory Planning, and Chapter 16 – Land Use and Property Impacts.			
	Describe alternatives considered for the project in particular technology and configuration including fuel source, air emission, water use and options for waste disposal / beneficial reuse and provide justification for the project demonstrating its benefits at a local and strategic scale in comparison to alternatives considered, including the do nothing option.	Chapter 3 – Alternatives to the Proposal.			
Greenhouse Gases	The EA must include a comprehensive greenhouse gas assessment undertaken in accordance with the methodology specified in the <i>National Greenhouse Accounts (NGA) Factors</i> (latest release) including:				
	<ul> <li>Quantification of emissions (in tonnes of carbon dioxide equivalent) in accordance with the Greenhouse Gas Protocol: Corporate Standard (World Council for Sustainable Business Development &amp; World Resources Institute) including: direct emissions (Scope 1), indirect emissions from electricity (Scope 2) and any significant up or down stream emissions (Scope 3) considering all stages of the project (annual emission for each year of the project during construction, operation and decommissioning is required to be provided)</li> </ul>	Chapter 9 -Air Quality, section 9.4, and Appendix E – Greenhouse Gas Assessment.			
	• Comparison of predicted emissions intensity and thermal efficiency against best achievable practice and current NSW averages for the activity, and of predicted emissions against total annual national emissions (expressed as a percentage of total national greenhouse gases production per year over the life of the project)	Chapter 9 – Air Quality, section 9.4 and Appendix E – Greenhouse Gas Assessment.			
	• Evaluation of the availability and feasibility of measures to reduce and/or offset the greenhouse emissions of the project including options for carbon capture and storage. Where current available mitigation technology is not technically or ergonomically feasible, the Environmental Assessment must demonstrate that the proposal will use best available technology, including carbon capture and readiness, and identify options for triggers that would require stages implementation of emerging mitigation technologies	Chapter 3 - Alternatives to the Proposal, Chapter 9 -Air Quality, section 9.4, and Appendix E – Greenhouse Gas Assessment.			
	<ul> <li>Evaluation of the project in the light of various carbon emission prices per tonne both with and without proposed mitigation measures</li> </ul>	Chapter 9 – Air Quality, section 9.4 and Appendix E – Greenhouse Gas Assessment.			

# Chapter 1

Requirement	Description	Chapter / Section of Environmental Assessment
Air Quality Impacts	The Environmental Assessment must include a comprehensive air quality impact assessment based on dispersion modelling prepared in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (DECC, 2005) (Approved Methods) considering worst case operating scenarios and meteorological conditions, representative monitoring and receiver locations and cumulative impacts, as applicable. The Environmental Assessment must address air quality impacts at a local, regional and interregional level and include a plume rise assessment. The assessment must demonstrate that the project would meet the impact assessment criteria in Section 7 of the Approved Methods and the requirements of the Protection of the Environment Operations (Clean Air) Regulation 2002 for all relevant pollutants based on ground level concentrations at the plant boundary and beyond at all sensitive receptors. The Environmental Assessment must clearly demonstrate that the project has been designed to include the application of Best Available Control Technology (BACT) in relation to air emissions. The assessment must include a framework for the mitigation, management and monitoring of air quality impacts, particularly with respect to sensitive receptors likely to be impacted by cumulative air quality impacts in the local area.	Chapter 3 – Alternatives to the Proposal, Chapter 9, - Air Quality, sections 9.2, 9.3, 9.6 and 9.7, and Appendix C - Air Quality Impact Assessment
Water Quantity and Quality Impacts	The Environmental Assessment must include an assessment of the water quantity and quality impacts of the proposal (i.e. surface and groundwater), with particular reference to the water needs for the life of the project, the proposed source of water, and the implementation of water saving measures (including use of rainwater and runoff from sealed, hardstand and disturbed areas as much as practically possible). In this regard, a water balance must be provided. The Proponent must be able to demonstrate that an adequate and secure water supply is available for the life of the project. The Environmental Assessment must demonstrate that any water crossings are designed in accordance with DWE Guidelines Controlled Activity Approvals. The Environmental Assessment must consider the adherence to existing embargo provisions for proposed water use or impact (e.g. Murray Darling Basin Groundwater Embargo – Order 2). The Environmental Assessment must also identify the quantity and quality of wastewater, how this wastewater would be disposed of, and how stormwater would be managed at the site. The Environmental Assessment must reflect a design philosophy of zero water flows.	Chapter 8 – Soils, Geology and Groundwater, and Chapter 14 – Water Management

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Requirement	Description	Chapter / Section of Environmental Assessment
Noise Impacts	The Environmental Assessment must include a comprehensive operational noise impact assessment for the project, prepared in accordance with <i>NSW Industrial Noise Policy</i> (EPA, 2000) considering worst case operating scenarios and meteorological conditions, representative monitoring and receiver locations, and cumulative impacts from any adjacent relevant land uses (existing and approved). The assessment must consider the potential for low frequency noise generation, peak noise events with the potential to cause sleep disturbance and the effects of stable atmospheric conditions. The Environmental Assessment must also consider the potential for:	Chapter 12 – Noise and Vibration, sections 12.4, 12.5, and 12.6, and Appendix G – Noise
	<ul> <li>Construction noise impacts consistent with the Interim Construction Noise Guidelines (DECCW, 2009)</li> </ul>	Chapter 12 – Noise and Vibration, and Appendix G – Noise
	<ul> <li>Vibration impacts during construction and operation consistent with Environmental Criteria for Road Traffic Noise (EPA, 1999). The method, data and assumptions used to assess the impact of road haulage on residential properties must be fully documented and justified.</li> </ul>	Chapter 12 – Noise and Vibration, and Appendix G – Noise
	<ul> <li>The Environmental Assessment must clearly outline the noise mitigation, monitoring and management measures the Proponent intends to apply to the project.</li> </ul>	Chapter 12 – Noise and Vibration, section 12.6, and Appendix G – Noise
Flora and Fauna Impacts	The Environmental Assessment (EA) must include an assessment of impacts of the project on flora and fauna, prepared in accordance with <i>Guidelines for Threatened Species Assessment</i> (DEC/DPI, July 2005) and specifically report on the considerations listed in Step 3 and whether it meets each of the key thresholds set out in Step 5. The development will need to avoid any endangered ecological communities and provide an appropriate buffer and asset protection zone.	Chapter 13, - Flora and Fauna, and Appendix H – Flora and Fauna Assessment
	The EA must specifically consider threatened species and communities listed under both State and Commonwealth legislation that have been recorded on the site and surrounding land. The EA must also detail measures to avoid or mitigate impacts on threatened species associated with the siting and construction of any access roads and other infrastructure. This must include the identification of any potentially impacted paddock and fence trees with an assessment of the functioning of this vegetation in terms of habitat and movement of arboreal threatened fauna in the local area.	
Indigenous Heritage	The EA must include an assessment of impacts on Aboriginal heritage, in accordance with draft <i>Guidelines for</i> <i>Aboriginal Cultural Heritage Impact Assessment and</i> <i>Community Consultation</i> (DEC, 2005). The EA must also include an assessment of the potential for the project to impact on known items of non-Aboriginal heritage significance, and include a management framework for management of any additional heritage items that may be uncovered during construction of the project. The EA needs to clearly demonstrate that effective community consultation with Aboriginal communities has been undertaken in determining and assessing impacts, developing options and making final recommendations for the mitigation of impacts	Chapter 15 – Heritage, and Appendix I – Cultural Heritage Assessment, and Chapter 6 - Consultation



# Chapter 1

Requirement	Description	Chapter / Section of Environmental Assessment
Hazards and Risk Impacts	The EA must include a screening of potential hazards on site (including new gas supply infrastructure) to determine the potential for off-site impacts and any requirement for a Preliminary Hazard Analysis (PHA). The PHA, should potential off-site impacts be identified, must be prepared in accordance with the Department's <i>Hazardous Industry</i> <i>Planning Advisory paper No. 3, Hazardous Industry</i> <i>Planning Advisory Paper No. 6</i> and <i>Multi-level Risk</i> <i>Assessment,</i> and with reference to applicable Australian Standards (including AS2885 Pipelines – Gas and Liquid Petroleum – Operation and Maintenance).	Chapter 18 – Preliminary Hazard Analysis, and Appendix J - Preliminary Hazard Analysis.
	Risk impacts associated with the transport of dangerous goods and hazardous materials must be documented with reference to the Department's draft Route Selection guideline.	
Visual Impacts	The EA must include an assessment of the visual impact of the project from representative viewing points including residential receivers, settlements and significant public view points and include the mitigation and management of visual amenity impacts on affected receivers.	Chapter 10 – Landscape and Visual, and Appendix K – Landscape and Visual Assessment
	An overview of the effectiveness and reliability of the measures and any residual impacts after the implementation of such measures must also be included.	
General Environmental Risk Analysis	Notwithstanding the above key assessment requirements, the EA 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.	Chapter 7 – Environmental Risk
	Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the Environmental Assessment.	
Consultation Re	quirements	
Consultation	You must undertake an appropriate and justified level of consultation with the following parties during the preparation of the Environmental Assessment:	Chapter 6 – Consultation and Appendix B.
	<ul> <li>NSW Department of Environment, Climate Change and Water including separate consultation with the Office of Water;</li> <li>Upper Lachlan Shire Council;</li> <li>NSW Department of Industry and Investment;</li> <li>Transgrid;</li> <li>Air Services Australia;</li> <li>Civil Aviation Authority;</li> <li>Department of Defence;</li> <li>Rural Fire Service;</li> <li>Lachlan Catchment Management Authority; and</li> <li>The local community including surrounding land owners.</li> </ul>	
	matters have been addressed in the document.	

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## Introduction

#### Table 1-2 Evaluation of Commonwealth Supplementary Director General's Requirements

Requ	irement	Description	Chapter / Section of Environmental Assessment			
Gene	General Requirements					
1. Th	1. The background of the action, including:					
а	the title	of the action	Chapter 1 -Introduction			
b	the full r	ame and postal address of the designated proponent	Chapter 1 -Introduction			
С	a clear c	outline of the objective of the action	Chapter 1 –Introduction, Chapter 2 – Project Need and Justification, Chapter 4 - Project Description			
d	the location	tion of the action	Chapter 1 –Introduction			
е	the back	ground to the development of the action	Chapter 2 – Project Need and Justification			
f	how the should r that hav	action relates to any other actions (of which the proponent easonably be aware) that have been, or are being, taken or e been approved in the region affected by the action	Chapter 2 – Project Need and Justification, section 2.6			
g	the curre	ent status of the action	Proponent is seeking approval for action.			
h	the cons	equences of not proceeding with the action	Chapter 2 – Project Need and Justification Chapter 3 – Alternatives to the Proposal			
Desc	ription of	the controlled action				
2. A c	descriptio	on of the action, including:	-			
а	all the co	omponents of the action	Chapter 4 - Project Description			
b	the prec built or e	ise location of any works to be undertaken, structures to be elements of the action that may have relevant impacts	Chapter 4 - Project Description			
с	how the aspects relevant	works are to be undertaken and design parameters for those of the structures or elements of the action that may have impacts	Chapter 4 - Project Description			
d	to the ex alternati the asse	ttent reasonably practicable, a description of any feasible ves to the controlled action that have been identified through essment, and their likely impact, including:	Chapter 4 - Project Description			
i	if releva	nt, the alternative of taking no action	Chapter 3 – Alternatives to the Proposal			
ii	a compa matters	arative description of the impacts of each alternative on the protected by the controlling provisions for the action	Chapter 3 – Alternatives to the Proposal			
iii	sufficien	t detail to clarify why any alternative is preferred to another	Chapter 3 – Alternatives to the Proposal			
A des	scription	of the relevant impacts of the controlled action				
3. An assessment of all relevant impacts <sup>1</sup> with reference to the <i>EPBC</i> Act Policy Statement 1.1 Significant Impact Guidelines Matters of National Environmental Significance (2009) that the controlled action has, will have or is likely to have on:						
a	relevant	threatened species and/or threatened ecological communities	Chapter 13 – Flora and Fauna			
	listed un Gum Wo	der sections 18 and 18A of the EPBC Act, including the Box- bodland and NTG.	Appendix H – Flora and Fauna Assessment			



# Chapter 1

Requirement		Description	Chapter / Section of Environmental Assessment			
4. Infe	4. Information must include:					
а	a descrij national	otion of the relevant impacts of the action on matters of environmental significance	Appendix H – Flora and Fauna Assessment			
b	a detaile and long	d assessment of the nature and extent of the likely short term term relevant impacts	Appendix H – Flora and Fauna Assessment			
С	a statem unpredic	ent whether any relevant impacts are likely to be unknown, table or irreversible	Appendix H – Flora and Fauna Assessment			
d	analysis	of the significance of the relevant impacts	Appendix H – Flora and Fauna Assessment			
е	any tech detailed	nical data and other information used or needed to make a assessment of the relevant impacts	Appendix H – Flora and Fauna Assessment			
5. A c NTG as we inclue	lescriptic should in ell as the de direct,	on of the relevant impacts on the Box-Gum Woodland and clude an analysis of the vegetation condition on the site, methods by which this was determined. It should also indirect, cumulative and facilitative impacts on the:				
а	extent of other are describe action).	the Box-Gum Woodland and NTG, including connectivity with eas of the ecological communities (These impacts should be d for the construction and operation phases of the controlled	Appendix H – Flora and Fauna Assessment			
b	quality o not limite ecologic mobilisa into the ecologic construct	r integrity of the Box-gum Woodland and NTG (including, but ed to, assisting invasive species, that are harmful to the al communities, to become established; or causing regular tion of fertilisers, herbicides or other chemicals or pollutants communities which kill or inhibit the growth of species in the al community) (These impacts should be described for the tion and operation phases of the controlled action).	Appendix H – Flora and Fauna Assessment			
С	EPBC A Gum Wo construc	ct listed species in, or in any way dependent upon, the Box- oodland or NTG (These impacts should be described for the tion and operation phases of the controlled action).	Appendix H – Flora and Fauna Assessment			
d	composi should b controlle	tion of the Box-Gum Woodland and NTG (These impacts e described for the construction and operation phases of the d action).	Appendix H – Flora and Fauna Assessment			
е	habitat p Woodlar construc	resent on site critical to the survival of the Box-Gum and and NTG (These impacts should be described for the tion and operation phases of the controlled action).	Appendix H – Flora and Fauna Assessment			
f	abiotic (i for the B increasin disturbat (These i phases o	non-living) factors (such as water, nutrients or soil) necessary ox-Gum Woodland and NTG's survival, for example ng groundwater levels or making the site wetter, soil nce or substantial alteration of surface water drainage patterns mpacts should be described for the construction and operation of the controlled action).	Appendix H – Flora and Fauna Assessment			
6. Wh as the ( <i>Tym</i> ) parage be un under subso listed facilit	ere there e Golden panocryp oulchella) dertaken fo equent de l species tative imp populatio	e is a potential habitat for EPBC Act listed species, such Sun Moth ( <i>Synemon plana</i> ), Grassland Earless Dragon <i>otus pinguicolla</i> ), Pink-tailed Worm-lizard ( <i>Aprasia</i> or Striped Legless Lizard ( <i>Delma impar</i> ), surveys must . These surveys must be timed appropriately and r a suitable period of time by a qualified person", A escription of the relevant impacts on such EPBC Act should include, inter alia, direct, indirect, cumulative and bacts on the:	Appendix H – Flora and Fauna Assessment Appendix H – Flora and Fauna			
			Assessment (Section 6)			



Requ	irement	Description	Chapter / Section of Environmental Assessment	
b	area of o	occupancy of the species	Appendix H – Flora and Fauna Assessment (Section 6)	
с	habitat critical to the survival of the species		Appendix H – Flora and Fauna Assessment (Section 6)	
d	breeding	g cycle of the population	Appendix H – Flora and Fauna Assessment (Section 6)	
е	availabil	ity or quality of habitat for the species	Appendix H – Flora and Fauna Assessment (Section 6)	
Prop	osed safe	eguards and mitigation measures		
7. A c contr propo to pro	description folled act onent or sevent or r	on of feasible mitigation measures, changes to the ion or procedures, which have been proposed by the suggested in public submissions, and which are intended ninimise relevant impacts. Information must include:		
a	a descri effective	ption, and an assessment of the expected or predicted ness of, the mitigation measures	Appendix H – Flora and Fauna Assessment (Section 7.2) Chapter 19 - Statement of	
		the manufact has in fact the mitigation measures		
D	any stat	utory or policy basis for the mitigation measures	Appendix H – Flora and Fauna Assessment (Section 7.2)	
с	the cost	of the mitigation measures	Mitigation Measures have not been costed at this stage of the Project.	
d	an outlir framewo	e of an environmental management plan that sets out the ork for continuing management, mitigation and monitoring	Appendix H – Flora and Fauna Assessment (Section 7.2.1)	
	program provisio	s for the relevant impacts of the action, including any ns for independent environmental auditing	Chapter 19 - Statement of Commitments	
е	the nam mitigation	e of the agency responsible for endorsing or approving each n measure or monitoring program	Chapter 19 - Statement of Commitments	
			The Agency responsible would be addressed in the Conditions of Approval for the Project.	
f	a conso to preve action	idated list of mitigation measures proposed to be undertaken nt, minimise or compensate for the relevant impacts of the	Appendix H – Flora and Fauna Assessment, Section 7	
			Chapter 19 - Statement of Commitments	
Offse	Offsets			
8. Sh neces prote perpe	8. Should any residual impact exist that cannot be mitigated it may be necessary for offset measures to be considered in order to ensure the protection of matters of national environmental significance in perpetuity. If required, the department may negotiate offsets with you during the accessment phase			



Chapter 1

Requirement		Description	Chapter / Section of Environmental Assessment			
Othe	Other approvals and conditions					
9. Any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action. Information must include:						
а	details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including:					
i	what env being, ca	/ironmental assessment of the proposed action has been, or is arried out under the scheme, plan or policy	Appendix H – Flora and Fauna Assessment			
ii	how the manage	scheme provides for the prevention, minimisation and ment of any relevant impacts	Appendix H – Flora and Fauna Assessment			
b	a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the Act), including any conditions that apply to the action		Part 3A Project Approval currently being sought from NSW DoPI. No approvals have been obtained to date.			
С	a statem	ent identifying any additional approval that is required	Part 3A Project Approval is currently being sought.			
d	a descrij that app	otion of the monitoring, enforcement and review procedures ly, or are proposed to apply, to the action	Appendix H – Flora and Fauna Assessment (Section 7)			
Econ	omic and	social matters				
10. A impli	descripti cations a	on of the short-term and long-term social and economic nd/or impacts of the project.	Chapter 17 - Socio Economic Assessment			
Envir	onmenta	I record of person proposing to take the action	Chapter 2 - Project Need and Justification (Section 2.5)			
11. D Territ and s	etails of a ory law f sustainab	any proceedings under a Commonwealth, State or or the protection of the environment or the conservation le use of natural resources against:				
а	the prop	onent	Chapter 2 – Project Need and Justification (Section 2.5)			
b	for an ac making t	tion for which a person has applied for a permit, the person he application	Chapter 2 – Project Need and Justification (Section 2.5)			
12. D frame	etails of t work	he proponent's environmental policy and planning	Chapter 2 – Project Need and Justification (Section 2.5)			
Infor	Information sources					
13. For information given in an environment assessment, the draft must state:						
а	the sour	ce of the information	Chapter 21 – References, Appendix H – Flora and Fauna (Section 9)			
b	how rece	ent the information is	Appendix H – Flora and Fauna (Section 4)			
С	how the	reliability of the information was tested	Appendix H – Flora and Fauna (Section 4)			
d	what und	certainties (if any) are in the information	Appendix H – Flora and Fauna (Section 4)			

Requ	irement	Description	Chapter / Section of Environmental Assessment
Cons	ultation		
14. A	ny consu	Itation about the action, including	
а	any consultation that has already taken place Chapter 6 - Consultation		
b	proposed consultation about relevant impacts of the action Chapter 6 - Consultation		Chapter 6 - Consultation
С	if there has been consultation about the proposed action – any documented response to, or result of, the consultation		Chapter 6 - Consultation
15. lo any o	lentificati communit	on of affected parties, including a statement mentioning ies that may be affected and describing their views.	Chapter 6 - Consultation, Chapter 15 – Heritage and Chapter 17 - Socio-economic

