Mt Piper Power Station Extension

ENVIRONMENTAL ASSESSMENT

CHAPTER 1- INTRODUCTION

- September 2009

Contents

1. Introduction

Director-General's requirement:

Consideration of any relevant statutory provisions including the consistency of the project with the objects of the Environmental Planning and Assessment Act 1979.

1.1 Overview

This chapter provides information on the proponent, describes the project and its objectives, outlines the statutory requirements including the consistency of the project with the objects of the Environmental Planning and Assessment Act 1979 (EP&A Act), and identifies the structure of the Environmental Assessment report.

This Environmental Assessment report has been prepared to support Delta Electricity's application for the construction and operation of the proposed Mt Piper Power Station Extension. It addresses the requirements for the preparation of an Environmental Assessment for the project, issued by the Director-General of Planning under Section 75F of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The report supports an application to the Minister for Planning under Section 75M (1) for concept approval.

The general location of Mt Piper Power Station is shown in **Figure 1-1** and the layout of the existing power station is shown in **Figure 1-2**. The proposed power station extension comprises the construction and operation of a new base-load power station and associated infrastructure with a maximum generating capacity of 2,000 megawatts (MW), fuelled either by coal, using ultra-supercritical (USC) generating technology or natural gas, using combined cycle gas turbine (CCGT) generating technology. Both options would use air cooled condensers (ACC) to minimise water usage. A new switchyard located adjacent to the existing switchyard is being constructed by TransGrid and it is through this that the new power station would connect to the electricity grid.

The project includes an area reserved for a future carbon capture plant, although approval for the construction and operation of the plant is not being sought in this application.

For the USC option, coal would be provided to the power station via the approved Western Rail Coal Unloader at Pipers Flat. New areas proposed for ash storage are being considered in a separate application which addresses future ash storage from the existing Units 1 and 2, as well as from the proposed USC option.

The source of gas for the CCGT plant option has not been determined, nor has the alignment for any gas pipeline to the plant. The transport of gas to the site would be the subject of a separate application.

- **Figure 1-1 Regional Location**

1.2 Project Objectives

The Report from the NSW Government's 2007 *Inquiry to Electricity Supply in NSW* (also known as the Owen Report) stated that NSW needs to be in a position where new baseload generation can be operational by 2013/14, in order to avoid potential short falls. Reduced demand forecasts since the report was prepared means that these dates have extended, but there still exists the need for planning and construction of new baseload power generation in NSW within the next 5-7 years. This proposal is a response to this need for additional baseload power generation in a cost-effective manner.

The objectives of the project are:

- To provide new baseload generating capacity to help satisfy NSW's future energy requirements;
- To provide this new capacity economically and with the latest technology available to minimise greenhouse gas emission levels; and
- To minimise and manage any environmental or social impacts which may result from the construction and operation of the proposed power station extension.

1.3 The Proponent

Delta Electricity (Delta) was formed in March 1996, when the New South Wales (NSW) Government Authority Pacific Power was separated into three State-owned generation companies. Delta's principal functions are to maintain and operate facilities for the generation and supply of electricity into the National Electricity Market (NEM) and it currently owns and operates the Mt Piper Power Station located at Mt Piper in central western NSW, near Lithgow (See **Figure 1-1**).

It is recognised that the NSW Government has indicated its intention to include the Mt Piper Power Station Extension Project as a Development Project which could be offered for sale as part of the NSW Energy Reform Strategy. Should this occur, then it is proposed that the approval being sought would be transferred to the new project owner. In this regard the term Proponent has been used in this document to refer to Delta Electricity currently, or to the future project owner.

1.4 Project Context

The Mt Piper Extension project is to be undertaken in the context of a number of other projects at various stages of approval and construction. These are shown in **Table 1-1**.

Table 1-1 Relevant Projects

Project or Facility	Outline
Mt Piper Extension Project	Project under Part 3A of EP&A Act for Concept Plan approval for a power station with a capacity of up to 2,000 MW of base load generation plant utilising either gas or coal. For the gas option, the plant will consist of up to six combined cycle gas turbine (CCGT) sets. For the coal option, the plant will consist of two ultra-supercritical (USC) units. Both options will use dry cooling to minimise water usage. The power station will be sited adjacent to the existing Mt Piper Power Station but will be an independent entity.
Ash Storage Project	Proposed project under Part 3A of EP&A Act for Concept Plan approval for future dry ash storage facilities for the existing Mt Piper Power Station and for the proposed Mt Piper Extension project. The Concept Plan provides for project approval for two areas (Lamberts North & Lamberts South) adjacent to the existing dry ash storage repository which will reach capacity around 2015. Both these areas are currently open-cut coal mines. The Concept Plan also seeks concept approval for two additional areas (Neubecks Creek and Ivanhoe No.4) which are further away and have yet to be mined.
Pipers Flat Rail Coal Unloader and Conveyor	The Pipers Flat rail coal unloader and conveyor is an approved project which will provide coal unloading facilities from rail at Pipers Flat. The unloader and conveyor have capacity to meet the needs of the existing Mt Piper Power Station as well as the proposed Mt Piper Power Station Extension. The conveyor will separate into two within the lands of the existing power station and separately. One conveyor would supply the existing station, the other would supply the separate coal storage yard and bunkers of Mt Piper Extension.
Gas Supply	Supply of gas for the gas fuel option for Mt Piper Extension is not part of this project. The gas could possibly come from the existing Moomba-Sydney gas supply line via a lateral at Young and follow the existing gas line from Young to Lithgow. A separate planning application would be needed for this new gas supply line.
Water Supply	The existing water supply mains to Mt Piper Power Station will supply Mt Piper Power Station Extension
Transmission	Mt Piper Extension will connect to the national grid through TransGrid's new 500 kV switchyard located near the proposed Mt Piper Extension. The switchyard is currently being commissioned.

1.5 Statutory Planning

1.5.1 Environmental Planning and Assessment Act 1979

Development in NSW is subject to the requirements of the *Environmental Planning and Assessment Act* 1979 (EP&A Act). The objects of the EP&A Act relevant to this project are to encourage:

- the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment;
- the promotion and co-ordination of the orderly and economic use and development of land;
- the protection, provision and co-ordination of communication and utility services;
- the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats;
- ecologically sustainable development;
- increased opportunity for public involvement and participation in environmental planning and assessment.

The project is consistent with the objectives of the Act in that it seeks to provide utility services (power generation) while ensuring the proper management of resources and the protection of the environment.

The EP&A Act establishes three types of environmental planning instruments to control land use: local environmental plans, regional environmental plans and State environmental planning policies. The environmental planning instruments applicable to the project are discussed below.

Major Project

In accordance with the *State Environmental Planning Policy (SEPP) (Major Projects) 2005* (Major Projects SEPP), the Minister for Planning has formed the opinion that the project, being a development for the purposes of electricity generation as defined in clause 24(a) of Schedule 1 to the Major Projects SEPP, is appropriately classified as a "major project" to which Part 3A of the EP&A Act applies (see letter dated 19 June 2009 in **Appendix A**).

Specifically, clause 24(a) of Schedule 1 applies to projects that involve:

> "*Development for the purpose of a facility for the generation of electricity or heat or their co-generation (using any energy source, including gas, coal, bio-fuel, distillate and waste and hydro, wave, solar or wind power), being development that:*
>
> *(a) has a capital investment value of more than $30 million.…*"

- **Figure 1-2 Mt Piper Power Station**

The Minister for Planning is the relevant approval body responsible for assessing and determining project applications under Part 3A of the EP&A Act.

In accordance with the requirements of Part 3A, a Concept Application was authorised on 19 June 2009 and submitted to the Department of Planning (DoP), outlining the proponent's proposal and a preliminary environmental assessment of the project. The DoP consulted with relevant government agencies and the local council regarding the application and prepared integrated requirements for an Environmental Assessment (EA). These requirements were provided to the proponent by the Director-General of Planning on 4 July 2009 (attached at **Appendix A).** The proponent must now prepare and present an EA (this document), along with a draft Statement of Commitments to the DoP.

Once the EA is submitted to the DoP, the following process will apply to the assessment of the project under Part 3A:

- the EA is evaluated and, if adequate, is exhibited for public comment;
- the DoP receives and addresses submissions made during the public exhibition and provides copies to the proponent who considers and addresses the submissions in a Submission Report provided to the DoP. The proponent may modify the proposal to address concerns raised and to minimise impacts and, if so, provides a Preferred Project Report to the DoP; and
- the proposal is assessed by the DoP and a report is prepared for the project and submitted to the Minister for a decision.

Critical Infrastructure Project

As of 26 February 2008, all new power stations in NSW with a generation capacity greater than 250MW have been declared as 'critical infrastructure' under section 75C of Part 3A of the EP&A Act. This declaration applies to all project applications for power stations lodged prior to 1 January 2013, irrespective of fuel source and whether the plant provides peaking, intermediate or base load generation.

The declaration has been made in an attempt to secure the State's future energy needs by providing the power generation industry with a robust and predicable planning process regarding the development of new power generation facilities.

As the proposed power station will have a generation capacity greater than 250MW, the project proposal will be assessed by the Minister for Planning as a "critical infrastructure" project under Part 3A. Whilst there are some differences which apply to the assessment of projects declared to be critical infrastructure projects under Part 3A, the environmental assessment process is the same as that which applies to other Part 3A projects.

1.5.2 Other State Legislation

Section 75U of the EP&A Act specifies certain approvals that are not required for an approved project under Part 3A. Consequently, if the Minister grants approval to carry out the project under section 75J (1) of the Act, the following approvals would not be required:

- an approval under Part 4 or an excavation permit under section 139 of the *Heritage Act 1977;*
- a permit under section 87 or a consent under section 90 of the *National Parks and Wildlife Act 1974* in relation to Aboriginal objects or places*;* and
- a water use approval under section 89, water management work approval under section 90 or an activity approval under section 91 o*f* the *Water Management Act 2000.*

Under section 75V of the EP&A Act, if the project is granted approval under Part 3A of the EP&A Act, certain approvals, if necessary for carrying out the approved project, cannot be refused by the relevant approval authority and such approvals must be substantially consistent with the terms of the project approval. **Table 1-2** identifies the licences and approvals that may be required for the construction and operation of the proposed Mt Piper Power Station Extension. Construction certificates would also be required for building works on the site, to be issued by the Department of Planning or an appropriate certifying authority.

1.5.3 Environmental Planning Instruments

Section 75R of the EP&A Act provides that environmental planning instruments, other than State environmental planning policies (SEPPs) that specifically relate to the particular project, do not apply to critical infrastructure projects under Part 3A of the Act. Nevertheless, a number of State Environmental Planning Policies (SEPPs) and Regional Environmental Plans (REPs) are relevant to the proposed development. The SEPPs include SEPP 33 – Hazardous and Offensive Development. The two relevant REPs include:

- Sydney REP 20 – Hawkesbury Nepean River (No. 2 1997); and
- Drinking Water Catchments REP No. 1. Whilst the proposed development lies within Sydney's drinking water catchment area, as defined by the Drinking Water Catchments REP, the works would not require referral to or concurrence from the Sydney Catchment Authority (SCA).

The matters identified for consideration in the SEPPs and REPs have been addressed in the Environmental Assessment report. The proposed development is located within the Lithgow Local Government Area (LGA) and would otherwise be subject to the provisions of the *Lithgow City Local Environmental Plan 1994* (LEP). Within this LEP, the development site is zoned as Rural (General) 1 (a) and the proposed works would be permissible with consent.

Table 1-2 Summary of Potential Approval Requirements under NSW Legislation

Reference	Approval Requirement	Required Action	Agency
Protection of the Environment Operations Act, 1997			
Section 48	Environment Protection Licence (EPL) for construction and operation.	The existing power station is subject to EPL 13007. An amendment to EPL 13007 under the Act may be sought by Delta for the proposed power station extension.	Department of Environment, Climate Change and Water
Roads Act 1993			
Section 138	Consent to erect a structure or carry out a work in, on or over a public road.	New configuration of Boulder Road access or creation of new access from Boulder Road or Castlereagh Highway, if required, would disturb the existing road surface. An application would be made if necessary.	Roads and Traffic Authority or Lithgow City Council

1.5.4 Commonwealth Legislation

Approval of the Commonwealth Minister for the Environment is required for any actions that may have a significant impact on matters of national environmental significance, as described in the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). As detailed in Section 5, studies undertaken for this project indicate that no matters of national environmental significance (in this instance nationally threatened species and migratory species) would be significantly affected. Nevertheless, a referral to the Department of Environment, Water, Heritage and the Arts was made and an assessment sought as to whether the project constitutes a 'controlled action" under the EPBC Act.

1.6 Report Structure

This assessment has been prepared in accordance with the DoP guidelines and the Director-General's Environmental Assessment requirements. A summary of the information contained within each chapter of the report is provided below:

- Chapter 1 introduces the project and provides an overview of the environmental assessment process;
- Chapter 2 provides the strategic justification of the project, outlining the need for the proposed rail unloader, consideration of alternatives and an analysis of the suitability of the preferred site, with respect to potential land use conflicts with existing and future surrounding land users;
- Chapter 3 provides a detailed description of the project;

- Chapter 4 discusses the consultation processes undertaken with the community and Government agencies. The issues for consideration in the assessment are identified;
- Chapters 5 to 13 provide an assessment of the key issues identified by the Director-General in terms of water cycle management, ecology, heritage, noise, air quality, greenhouse gases, visual impacts, hazard and risks and waste management. Where impacts were identified or anticipated, mitigation measures were described and residual environmental impacts assessed;
- Chapter 14 provides a general environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), an assessment of those other risks, proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures;
- Chapter 15 provides a justification for undertaking the project, with consideration of the benefits and impacts of the proposal, and an overall conclusion;
- Chapter 16 summarises environmental management and mitigation measures and provides a draft Statement of Commitments;
- Chapter 17 lists the references used during the study.

A glossary of terms and list of abbreviations is also provided.

Appendices to this report provide information relevant to the Environmental Assessment. Appendices included in the report are as follows:

- Appendix A – Project Declaration and Environmental Assessment Requirements;
- Appendix B – Ecological Assessment;
- Appendix C – Cultural Heritage Assessment;
- Appendix D – Operational and Construction Noise Impact Assessment;
- Appendix E – Air Quality Assessment;
- Appendix F – Greenhouse Gas Assessment;
- Appendix G – Preliminary Hazard Analysis.