

Mt Piper Power Station Extension

ENVIRONMENTAL ASSESSMENT

CHAPTER 17 – REFERENCES AND GLOSSARY

- September 2009



Contents

17. References and Glossary	17-1
17.1 References	17-1
17.2 Glossary	17-5

17. References and Glossary

17.1 References

ABS (Australian Bureau of Statistics) (2001; 2006) *Census of Population and Housing*, Australian Government Publishing Service, Canberra, www.abs.gov.au

ANZECC 2000, Australian Water Quality Guidelines for Fresh and Marine Waters, Australian and New Zealand Environment and Conservation Council, Kingston.

Armour, A. (1992) *The Challenge of Assessing Social Impacts*, The Social Impact Management Bulletin, Vol 1 No 4

Aurecon (2009) *Plant Performance Review Report Mt Piper Extension Delta Electricity*, August 2009.

Austrroads (1998) *Guide to Traffic Engineering Practice*, Part 2

Barton, H. and J. McDonald 1994 *Archaeological Investigation of Sites affected by Augmentation Works at Lyell Dam, near Lithgow, NSW*. Salvage and Test Excavation Report. Report to Pacific Power.

Branagan, D.F. (1960) *Structure and Sedimentation in the Western Coalfield of NSW*, AusIMM Proceedings 196, December 1960, p79-116.

Briggs, J. D. and Leigh, J. H. (1996), *Rare or Threatened Australian Plants* CSIRO Publications.

Brown, J. W. 1989 *Bent backs: an illustrated social and technological history of the Western Coalfields*. Industrial Printing Company, Lithgow.

CASA (2004), *AC 139-05(0): Guidelines for Conducting Plume Rise Assessments*, Civil Aviation Safety Authority, Australia.

CCPS (1989) Center for Chemical Process Safety (CCPS), *Guidelines for Chemical Process Quantitative Risk Analysis*, American Institute of Chemical Engineers, New York, New York, 1989.

Connell Wagner (2007) *Mount Piper Power Station Extension of Brine Conditioned Ash Placement Area Statement of Environmental Effects*. June 2007.

Connell Wagner (2007) *Report to the Owen Enquiry into Electricity Supply in NSW: NSW Power Generation and CO₂ Emissions Reduction Technology Options*. August 2007.

Connell Wagner (2008a) *Mt Piper Extension project. Plant Definition Study*. Delta. June 2008

Connell Wagner (2008b) *Mt Piper Extension Project. Construction Management Study*. Delta. June 2008.

Cox, A.W. Lees, G.F.P. & Ang, M.L. (1991), *Classification of Hazardous Locations*, A report of the Inter-Institutional Group on the Classification of Hazardous Locations (IIGCHL), IChemE, Rugby, UK.

Cuevas-Cubria, C. and Riwoe, D., (2006), *Australian Energy: National and State Projections to 2029-30*, Australian Bureau of Agricultural and Resource Economics Research Report 06.26 Prepared for the Australian Government Department of Industry, Tourism and Resources, Canberra, December 2006.

DEC (2005) *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*. Department of Environment and Conservation (now DECCW). August 2005.

DCC (2008) *National Greenhouse Accounts (NGA) Factors – Updating and Replacing the AGO Factors and Methods Workbook*. Department of Climate Change, Commonwealth of Australia, November 2008.

Department of Planning (1992a) *Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis*.

Department of Planning (1992b) *Hazardous Industry Planning Advisory Paper No. 4 - Risk Criteria for Land Use Safety Planning*.

Department of Planning (1992c) *Hazardous Industry Planning Advisory Paper (HIPAP) No.9 – Safety Management System Guidelines*.

Department of Planning (1992d) *Hazardous Industry Planning Advisory Paper (HIPAP) No.1 – Industry Emergency Planning Guidelines*.

DUAP (Department of Urban Affairs and Planning, now Department of Planning) (1997) *Multi-Level Risk Assessment*

DUAP (Department of Urban Affairs and Planning, now Department of Planning) (1994) *Applying SEPP 33 - Hazardous and Offensive Development Guidelines*

Ecotone Ecological Consultants (1996) *Flora and Fauna Survey and Assessment Mount Piper Power Station Perimeter Lands and Thompsons Creek Dam*, Report prepared for Delta Electricity.

ESOO 2009. *The Electricity Statement of Opportunities* (published by AEMO in August 2009).i

EPA (1994). *Environmental Noise Control Manual (ENCM)* Environment Protection Authority.

EPA (1997). *Guidelines for Consultants Reporting on Contaminated Sites*. Environment Protection Authority.

EPA (1999). *Environmental Criteria for Road Traffic Noise (ECRTN)*. Environment Protection Authority.

EPA (2000). *NSW Industrial Noise Policy (INP)*. Environment Protection Authority.

Gorecki, P. (1982) *Archaeological Survey, Angus Place Colliery Lease, Lithgow, NSW*, Report prepared for MacDonald Wagner and Priddle Pty Limited.

Holmes Air Sciences (2005) *Air Quality Impact Assessment: Proposed Upgrade to Mt Piper Power Station*. Prepared by Holmes Air Sciences for Connell Wagner, December 2005.

Landcom (2004) *Managing Urban Stormwater, Soils & Construction* Volume 1, 4th Edition, March 2004.

Lithgow City Council (2001) *Heritage interpretation signage, Main Street Wallerawang*.

Lithgow City Council 2008 *Social Plan 2006-2011*.

Lithgow City Council (2004) *Coal Mining in Lithgow*. Lithgow Tourist Information Series – The Coal Industry.

McKinsey (2008) *Carbon Capture & Storage: Assessing the Economics* September 2008.

Morris, F.R. (1975) Western Coalfield, in Traves, DM and King, D (editors) *Economic Geology of Australia and PNG*, Volume 2 Coal, p231-235, AusIMM, Melbourne, Monograph 6

NEMMCO (National Electricity Market Management Company) (2008) *Energy and Demand Projections, Summary Report*, July 2008.

NSW Government (2007) *Inquiry into Electricity Supply in NSW*, September 2007.

NSW Treasury (2008) *State Infrastructure Strategy 2008-2010*.

OREDA (2003), *Offshore Reliability Data*, 4th ed., prepared by SINTEF Industrial management, Trondheim, Norway.

Owen, A.D. (2007), *Inquiry to Electricity Supply in NSW, prepared for the New South Wales Government*, September 2007.

Pacific Power International (2001) *Mount Piper PS – Installation of Groundwater Observation Wells*, Unpublished report GEO 165 to Delta Electricity, October 2001.

SKM (2005) *Mt Piper Extension Feasibility Study*, Prepared for Delta Electricity.

SKM (2007) *Western Rail Coal Unloader Environmental Assessment*, Prepared for Delta Electricity. Sinclair Knight Merz.

SKM (2008) *Western Rail Coal Unloader – Baal Bone to Mt Piper Coal Conveyor Options Assessment – Review of Ecological Constraints*. Prepared for Delta Electricity. Final Report, February 2008. Sinclair Knight Merz.

SKM (2009) *Functional definition of CCGT*. Prepared for Delta Electricity. Draft Report, June 2009. Sinclair Knight Merz.

Tindale, N. B. (1974) *Aboriginal Tribes of Australia*. University of California Press.

Tweeddale, H.M. (1993), *Hazard Assessment and Reduction*, Department of Chemical Engineering, University of Sydney.

WBCSD (2004). *Facts and Trends to 2050: Energy and Climate Change*. World Business Council for Sustainable Development/World Resources Institute, Washington, D.C. 20002, USA

Western Research Institute (2005) *Regional Community Research*, Prepared for Delta Electricity.

Wood Mackenzie (2007) *Owen Inquiry into Electricity Supply in NSW, Availability and Cost of Gas for NSW Baseload Generation*, 31 July 2007.

17.2 Glossary

Term	Meaning
ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ACC	Air Cooled Condenser
AHIMS	Aboriginal Heritage Information Management System
ALARP	As low as reasonably possible
Baseload generation	Power plants that are optimised economically and in an engineering sense to a relatively constant, steady and reliable stream of energy.
Baseload generator	Generating plant that is normally operated to produce electricity for most hours of the year.
BLALC	Bathurst Local Aboriginal Land Council
BLEVE	Boiling Liquid Expanding Vapour Explosion
CASA	Civil Aviation Safety Authority
CCGT	Combined Cycle Gas Turbine – a power plant in which a gas turbine generator generates electricity and the waste heat from the gas turbine is used to make steam to generate addition electricity via the steam turbine.
CCS	Carbon capture and storage
CEMP	Construction Environmental Management Plan
CH ₄	Methane
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ -e	Carbon dioxide equivalent
CPRS	Carbon Pollution Reduction Scheme
CSG	Coal seam gas
d(B)A	Decibel
DECCW	NSW Department of Environment, Climate Change and Water
Delta	Delta Electricity
DGRs	Director-General's requirements
DLN	Dry low NOx
DoP	NSW Department of Planning
EA	Environmental Assessment
ECRTN	Environmental Criteria for Road Traffic Noise
EEC	Endangered ecological community
Electricity demand	The electricity requirement to be met by generating units at a point in time, measured in megawatts. Includes: electrical power consumed by consumers; distribution and transmission losses; and power station transformer losses and auxiliary loads.
EMP	Environmental Management Plan
ENCM	Environmental Noise Control Manual
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
ERIMP	Emergency Response and Incident Management Plan

Term	Meaning
ESC	Effective survey coverage
ESD	Ecologically sustainable development
FGD	Flue gas desulphurisation
GHG	Greenhouse gas
GT	Gas turbine
GW	Gigawatt – 1×10^9 watts, i.e. one thousand million (or one billion) watts. A commonly used term to describe power generation capacity or level of demand.
GWh	Gigawatt hour– 1 gigawatt hour. The amount of energy produced or consumed over one hour in a system operating at a capacity level of one gigawatt. A commonly used term to describe power generation production or consumption.
H ₂	Hydrogen
HDR	Hot dry rock
HF	Total fluoride
HHV	Higher heating value
HP	High pressure
HRSG	Heat Recovery Steam Generator
IGCC	Integrated Gasification Combined Cycle
INP	Industrial Noise Policy
kV	Kilovolt
LEP	Local Environmental Plan
LGA	Local Government Area
LP	Low pressure
m ³	Cubic metres
mg	Milligram
ML	Megalitre
MPRS	Meter Pressure Regulating Station
MW	Megawatt
N ₂ O	Nitrous oxide
NEM	National Electricity Market – the market to facilitate the wholesale exchange of electricity; operated by NEMMCO.
NEMMCO	National Electricity Market Management Company.
NEPM	National Environment Protection Measure
NGA	National Greenhouse Accounts
NGERS	National greenhouse and energy reporting scheme
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxides
O ₂	Oxygen
O ₃	Ozone
OCGT	Open Cycle Gas Turbine – a power plant in which a gas turbine generator generates electricity and the waste heat from the gas turbine is exhausted to the atmosphere for cooling. Typically used in times of peak power demand.
OEMP	Operational Environmental Management Plan
OLS	Obstacle Limitation Surface

Term	Meaning
PA	Project Application
PCCC	Post Combustion Carbon Capture
PEA	Preliminary Environmental Assessment
pH	A measure of the acidity or basicity of a solution.
PJ	Petajoule
PAD	Potential archaeological deposits
PHA	Preliminary Hazard Analysis
PM ₁₀	Particulate matter with particles less than 10 microns in size.
POEO Act	Protection of the Environment Operations Act 1997
ppm	Parts per million
PV	Photovoltaic
RBL	Rating Background Level
REP	Regional Environmental Plans
RET	Renewable Energy Target
RO	Reverse osmosis
rpm	Revolutions per minute
RTA	Roads and Traffic Authority
SC	Supercritical
SCR	Selective catalytic reduction
ST	Steam turbine
SEPP	State Environmental Planning Policies
SKM	Sinclair Knight Merz
SO ₂	Sulphur dioxide
SO _x	Sulphur oxides
SWMP	Soil and Water Management Plan
TDS	Total dissolved solids
TSC Act	Threatened Species Conservation Act 1995
USC	Ultra-supercritical coal. USC technology is the most efficient coal technology commercially available at present. There is an arbitrary transition from supercritical coal technology, but generally steam conditions above 26 MPa pressure and 580-600°C are termed ultra-supercritical.
VAC	Visual absorptive capability
VOCs	Volatile organic compounds
VMU	Visual management unit
WARR Act	Waste Avoidance and Resource Recovery Act 2001
Watt	Basic unit of electrical power.
Watt-hour	Wh – basic measure of electrical energy (energy = power x time)
WML	Water management licence
WMP`	Waste Management Plan
WRAPP	Waste Reduction and Purchasing Policy