



Tallawarra Stage B Gas Turbine Power Station

Environmental Assessment

Volume 1 July 2009



Tallawarra Stage B Gas Turbine Power Station

ENVIRONMENTAL ASSESSMENT

- Final
- July 2009

Sinclair Knight Merz
ABN 37 001 024 095
100 Christie Street
PO Box 164
St Leonards NSW
Australia 1590
Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.skmconsulting.com

Contents

Certification	vii
Executive Summary	viii
1. Introduction	1-1
1.1. Overview	1-1
1.2. Background	1-1
1.3. Overview of the project	1-5
1.4. Project objectives	1-7
1.5. The proponent	1-7
1.6. Planning approvals	1-8
1.7. Structure of the report	1-8
2. Statutory provisions	2-1
2.1 Commonwealth legislation	2-1
2.2 State legislation	2-2
2.2.1 Environmental Planning and Assessment Act 1979	2-2
2.2.2 Other NSW approvals	2-4
3. Strategic Justification	3-1
3.1. Need for the project	3-1
3.1.1. The National Electricity Market	3-1
3.1.2 Supply constraints	3-2
3.1.3 Electricity demand	3-3
3.1.4 Future electricity generation	3-5
3.2. Consideration of alternatives	3-6
3.2.1. Alternative locations considered	3-6
3.2.2. Alternative network connections	3-8
3.2.3. Cooling options	3-9
3.2.4. Alternative water supply	3-9
3.3. Consequences of not proceeding	3-10
4. Consultation and identification of environmental issues	4-1
4.1 Stakeholder consultation	4-1
4.1.1 Authority consultation	4-1
4.1.2 Additional stakeholder and authority consultation	4-3
4.2 Community consultation	4-4
4.2.1 Tallawarra community liaison group	4-4
4.2.2 Other community consultation mechanisms	4-9

5.	Description of the project	5-1
5.1	Location	5-1
5.2	Elements of the project	5-1
5.3	Open cycle gas turbine	5-5
5.3.1	Cooling system	5-6
5.3.2	Fuel	5-6
5.3.3	Emissions control	5-9
5.3.4	Water demand	5-9
5.3.5	Construction program and hours	5-10
5.3.6	Construction workforce	5-11
5.3.7	Operation	5-11
5.4	Combined cycle gas turbine	5-11
5.4.1	Cooling system	5-15
5.4.2	Fuel	5-18
5.4.3	Emissions control	5-18
5.4.4	Water demand	5-18
5.4.5	Construction program and hours	5-19
5.4.6	Construction workforce	5-19
5.4.7	Operation	5-19
5.5	Additional infrastructure	5-20
5.5.1	Transformers and high voltage switchyard	5-20
5.5.2	Chemical and oil storage	5-22
5.5.3	Emergency diesel generators	5-22
5.5.4	Water Management	5-22
5.5.5	Construction activities and equipment	5-25
5.6	Use of Tallawarra Stage A facilities	5-26
5.6.1	Administration, control building, amenities and workshop	5-26
5.6.2	Site security and lighting	5-26
5.6.3	Sewage treatment	5-26
5.6.4	Water Intake and Outlet	5-27
5.6.5	Site access and parking	5-27
5.6.6	Emergency systems	5-27
5.6.7	Work compounds	5-27
6.	Existing environment and risk analysis	6-1
6.1	Existing environment	6-1
6.1.1	Land use and tenure	6-1
6.1.2	Air quality and climate	6-3
6.1.3	Noise environment	6-8
6.1.4	Waterways and water quality	6-14
6.1.5	Terrestrial ecology	6-19

6.1.6	Aquatic ecology	6-25
6.1.7	Aboriginal heritage	6-28
6.1.8	Visual amenity	6-32
6.1.9	Traffic and transport	6-33
6.2	Preliminary Environmental Risk Analysis	6-35
7.	Open cycle gas turbine	7-1
7.1	Air quality	7-1
7.1.1	Air quality objectives	7-1
7.1.2	Project specific DECC requirements	7-3
7.1.3	Assessment methodology – local impacts	7-4
7.1.4	Local air quality impact assessment	7-7
7.1.5	Regional air quality impacts	7-20
7.1.6	Mitigation measures	7-21
7.2	Plume rise assessment	7-22
7.2.1	Assessment methodology	7-23
7.2.2	Plume rise results	7-25
7.2.3	Summary	7-28
7.3	Greenhouse gas generation	7-28
7.3.1	Construction greenhouse gas generation	7-28
7.3.2	Operational greenhouse gas emissions	7-28
7.3.3	Emission forecasting methodology	7-29
7.3.4	GHG emission estimates	7-30
7.3.5	Proposed management measures	7-32
7.4	Noise	7-33
7.4.1	Assessment criteria	7-33
7.4.2	Operational noise impact assessment	7-35
7.4.3	Construction noise impact assessment	7-40
7.4.4	Mitigation and management of noise impacts	7-40
7.5	Hazards and risk	7-42
7.5.1	Methodology	7-42
7.5.2	Hazard analysis	7-43
7.5.3	Consequence and frequency analysis	7-43
7.5.4	Risk analysis	7-44
7.5.5	Mitigation	7-46
7.6	Water	7-47
7.6.1	Water demand	7-49
7.6.2	Flooding	7-50
7.7	Ecology	7-51
7.7.1	Significance assessments	7-51
7.7.2	Summary	7-62
7.7.3	Mitigation measures	7-62

7.8	Aboriginal heritage	7-62
7.8.1	Assessment of impacts	7-62
7.8.2	Mitigation and management	7-63
7.8.3	Summary	7-63
7.9	Visual	7-63
7.9.1	Methodology	7-63
7.9.2	Visual modification	7-34
7.9.3	Visual sensitivity	7-64
7.9.4	Visual impact	7-65
7.9.5	Visual impact assessment	7-66
7.9.6	Visual impact	7-68
7.9.7	Mitigation measures	7--70
7.9.8	Summary	7-71
7.10	Traffic and transport	7-72
7.10.1	Assessment of impacts and mitigation measures	7-72
7.10.2	Summary	7-73
7.11	Waste	7-74
7.11.1	Statutory framework for waste management	7-74
7.11.2	Potential wastes generated from the project	7-74
7.11.3	Waste management	7-75
7.11.4	Mitigation measures	7-76
7.11.5	Summary	7-77
8.	Combined cycle gas turbine	8-1
8.1	Air quality	8-1
8.1.1	Air quality objectives	8-1
8.1.2	Project specific DECC requirements	8-2
8.1.3	Assessment methodology	8-4
8.1.4	Local air quality impact assessment	8-6
8.1.5	Regional air quality impacts	8-17
8.1.6	Mitigation measures	8-17
8.2	Plume rise assessment	8-18
8.2.1	Assessment methodology	8-20
8.2.2	Plume rise results	8-21
8.2.3	Summary	8-24
8.3	Greenhouse gas generation	8-24
8.3.1	Construction greenhouse gas generation	8-24
8.3.2	Operational greenhouse gas emissions	8-24
8.3.3	Emission forecasting methodology	8-25
8.3.4	GHG emission estimates	8-25
8.3.5	Proposed management measures	8-27
8.4	Noise	8-28

8.4.1	Assessment criteria	8-28
8.4.2	Operational noise impact assessment	8-30
8.4.3	Construction noise impact assessment	8-36
8.4.4	Mitigation and management of noise impacts	8-36
8.5	Water quality and the ecology of Lake Illawarra	8-38
8.5.1	Effects of cooling water on water chemistry	8-39
8.5.2	Effects of blowdown flow rate, water temperature and relative density	8-46
8.6	Hazards and risk	8-47
8.6.1	Methodology	8-47
8.6.2	Consequence and frequency analysis	8-48
8.6.3	Risk analysis	8-49
8.6.4	Mitigation and management	8-51
8.7	Ecology	8-52
8.7.1	Significance assessment	8-57
8.7.2	Summary	8-62
8.7.3	Mitigation measures	8-62
8.7.4	Flooding	8-62
8.8	Aboriginal heritage	8-64
8.8.1	Assessment of impacts	8-64
8.8.2	Mitigation and management	8-65
8.8.3	Summary	8-65
8.9	Visual	8-66
8.9.1	Methodology	8-66
8.9.2	Visual modification	8-66
8.9.3	Visual sensitivity	8-66
8.9.4	Visual impact	8-67
8.9.5	Visual impact assessment	8-68
8.9.6	Visual impact	8-70
8.9.7	Mitigation measures	8-70
8.9.8	Summary	8-74
8.10	Traffic and transport	8-75
8.10.1	Assessment of impacts and mitigation measures	8-75
8.10.2	Summary	8-76
8.11	Waste	8-77
8.11.1	Statutory framework for waste management	8-77
8.11.2	Potential wastes generated from the project	8-77
8.11.3	Waste management	8-78
8.11.4	Mitigation measures	8-79
8.11.5	Summary	8-80

9.	Statement of commitments	9-1
9.1	Introduction	9-1
9.2	Construction environmental management and mitigation	9-1
9.3	Operational environmental management and mitigation	9-5
9.4	Environmental reporting	9-8
9.5	Emergency response	9-8
9.6	Conclusions	9-8
10.	Conclusion	10-1
10.1	Site suitability	10-1
10.2	Strategic Justification	10-1
10.3	Assessment of Environmental Issues	10-2
10.4	Ecologically Sustainable Development	10-2
10.4.1	Precautionary approach	10-3
10.4.2	Inter-generational equity	10-3
10.4.3	Biodiversity and ecological integrity	10-4
10.4.4	Assessment against the principles of Ecologically Sustainable Development	10-4
10.5	Summary	10-5
11.	References	11-1
Appendix A – Stakeholder Correspondence		
Appendix B – Air Quality Assessment		
Appendix C – Plume Rise Assessment		
Appendix D – Greenhouse Gas Assessment		
Appendix E – Noise Assessment		
Appendix F – Preliminary Hazard Analysis		
Appendix G – Water Quality Calculations		

Certification

This Environmental Assessment was prepared by:

Name: Kenneth Robinson

Qualifications: BSc (Hons), MEnvStud, PhD, MPIA

In respect of: TRUenergy's Tallawarra Stage B Gas Turbine Power Station

Certification

I certify that I have prepared the contents of this Environmental Assessment and to the best of my knowledge the information contained in the Assessment is neither false nor misleading.

Signature:



Name: Kenneth Robinson

Date: 21 July 2009

Executive summary

Background

This report has been prepared to support TRUenergy's project application for the construction and operation of the proposed Tallawarra Stage B Gas Turbine Power Station. It addresses the requirements for the preparation of an Environmental Assessment for the project, issued by the Director-General of Planning (DoP) 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 75J (1) for project approval.

TRUenergy, the proponent for the project, is a provider of both electricity and natural gas to residents and businesses in Victoria, South Australia, New South Wales and the Australian Capital Territory, as well as providing electricity in Queensland and to businesses in Tasmania. It also owns power stations in Victoria and South Australia, the Iona Gas Plant and associated gas storage in Victoria and has commissioned the Tallawarra Stage A power station in New South Wales.

The location of the project site is shown in **Figure 1**. The proposed development would be located on land owned by TRUenergy and would be adjacent to the Tallawarra Stage A power station which is now in commercial operation.

Project Description

The Tallawarra Stage B power station comprises the construction and operation of:

- power station plant, consisting of:
 - 2 or 3 open cycle gas turbine (OCGT) generators with a nominal capacity of 300-450MW, or
 - one combined cycle gas turbine (CCGT) generator with a nominal capacity of 400MW;
- turbine condensate cooling comprising wet cooling towers with lake water make-up (CCGT only);
- distillate tank and unloading station (OCGT only);
- high voltage switchyard (extension) comprising high voltage electrical connection to the unit transformers and associated switchgear;
- transmission line connection to the existing 132kV network;
- connecting gas pipelines, gas metering and pressure reduction station;
- potable/fire water tank;
- demineralised water tank;
- electrical module; and
- emergency diesel generator.



Legend

- Proposed Tallawarra B
- Tallawarra A
- Tallawarra Land Border
- Power Station Site Boundary

Source: Aerial supplied by TRUenergy,
Topographic data by Streetworks

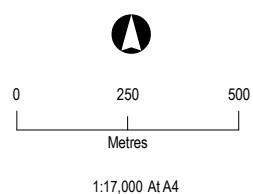


Figure 1 - Site Layout

Projection: GDA94 MGA Zone 56

EN02239 - Tallawarra Stage B Power Station

February 23, 2009
I:\ENVR\Projects\EN02239\Technical\GIS\Template\EN02239_003a_Fig1.mxd

The project will also utilise, where possible, existing infrastructure associated with the Tallawarra Stage A power station, including the existing gas supply lateral pipeline, water treatment plants, control room, administration, amenities and workshop buildings.

Strategic Issues

As a result of increasing population growth and electricity usage, the demand for electricity generation in NSW is reaching the current supply capacity and therefore new generation facilities are required. The Inquiry into Electricity Supply in NSW (Owen Inquiry) (Owen, 2007) indicated that future electricity generation would most likely entail an open cycle gas-fired power station, a combined cycle gas-fired power station or a coal-fired power station within the Wollongong – Sydney – Newcastle major load areas. Due to the high greenhouse intensity of coal-fired generation, the NSW Government recognises that further development of the State's gas industry is advantageous.

The Tallawarra Stage B proposal would comprise either an open cycle (OCGT) or a combined cycle (CCGT) gas-fired power station within the Wollongong – Sydney major load area. In contrast to coal-fired power generation, the Tallawarra Stage B proposal would provide base load, intermediate or peaking electricity that is capable of operating within a carbon constrained environment.

The decision as to whether to proceed with an OCGT or CCGT plant would be made following analysis of market needs.

The alternative to proceeding with the Tallawarra Stage B proposal is to rely on other sources of electricity generation or demand management strategies to meet future electricity needs. Demand management and renewable energy sources, although desirable strategies, are not considered to be viable alternatives as they would be unlikely to be able to provide the necessary capacity to meet future demand for electricity.

The Tallawarra Stage B proposal would provide additional electricity supply in NSW to address the predicted market requirements and is considered to provide the best means of meeting future demand. The proposed development would also improve the reliability and security of electricity supply, provide direct and indirect employment opportunities and provide improved environmental outcomes when compared with conventional power generation technologies. The consequences of not proceeding with the proposal would result in the loss of the benefits of the project.

The choice of the site for the Tallawarra Stage B power station was based on a review of all practical options. The proposed site at Tallawarra is considered an ideal location for the proposed power station as:

- The site is already owned and operated by TRUenergy;
SINCLAIR KNIGHT MERZ

- The Tallawarra Stage A power station has recently been commissioned on this site and the proposed Tallawarra Stage B power plant would utilise some of the existing equipment and infrastructure associated with the Tallawarra Stage A power station;
- The proposed Tallawarra Stage B power station would be located within a highly disturbed area associated with the former coal fired power station; and
- The site would also have the benefit of being located within the Wollongong – Sydney – Newcastle major load centre and therefore able to provide reliable electricity supply to this high demand area without transmission network constraints. This location is therefore a suitable site for providing electricity supply to the local and regional market.

Assessment of environmental issues

The detailed studies outlined in this Environmental Assessment have addressed the key issues identified in the requirements provided by the Department of Planning. The assessment has demonstrated that the project can be completed without significant impacts from the development and without significant cumulative impacts on the community or local environment when combined with TRUenergy's currently approved Tallawarra A operations.

Key environmental considerations

The Director-General of Planning's requirements for the proposed Stage B power station were issued in October, 2007. The requirements identified the following key environmental considerations:

- Greenhouse gas generation: including assessment of predicted emissions, comparison to 'best practice' emissions and evaluation of additional measures to reduce emissions;
- Air quality impacts: including demonstration that the air pollutant emissions would not affect human health or the environment and that the proposed plant is either NO_x (oxides of nitrogen) neutral or utilises the best available control technology to minimise NO_x emissions;
- Noise impacts: including assessment of the impacts of Stage A and Stage B plants individually and cumulatively and the consideration of existing and proposed future land uses in the area;
- Water quality and matters related to Lake Illawarra: comprising assessment of the impacts of the proposal, including the water intake and cooling water discharge, on water quality, aquatic ecology, amenity and fisheries; and
- Hazards and risk impacts: including risks associated with storage of dangerous goods and gas supply and aviation hazards resulting from plume rise impacts.

The key issues identified in the Director-General's requirements and addressed in this Environmental Assessment are described below.

Air quality

The Illawarra has two dominant types of air pollution - photochemical smog and particulates. The key pollutant of concern for the proposed development is nitrogen oxide (NO_x), as any new source of NO_x may compromise the achievement of the State Plan clean air target. To minimise the bearing of the proposed plant on achieving the clean air target, DECC has set project specific air quality goals for the proposed Stage B plant, including the need to be NO_x neutral.

Analysis of the air quality modelling results shows that the maximum cumulative concentrations resulting from the extension to the Tallawarra Stage A power station, as either Tallawarra B OCGT plant or as Tallawarra B CCGT plant, are predicted to be within the DECC criteria for nitrogen dioxide (NO_2) and ozone (O_3) as a measure of photochemical smog, sulphur dioxide (SO_2), and particulate matter (as PM_{10}).

The approval conditions for the Tallawarra Stage A power station require that NO_x emissions do not exceed a defined mass load limit in tonnes per annum (tpa). At full load, it is likely that Tallawarra Stage A would have a NO_x mass load significantly less than the approved level, and DECC has requested that the Tallawarra Stage B power station should achieve a NO_x neutral outcome such that the combined NO_x emissions from Tallawarra Stage A and Tallawarra Stage B should be less than or equal to the approved conditions for Tallawarra Stage A.

To ensure that this limit is not exceeded, the proposed Stage B OCGT plant would be limited in the amount of time it could operate. In relation to the proposed Stage B CCGT plant, it is unlikely that the plant, operating at its required capacity, could achieve this limit. Therefore, to ensure that the Tallawarra Stage B power station achieves a NO_x neutral scenario, NO_x offset opportunities have been considered. From this range of offset opportunities, the most effective offsets available to TRUenergy for the Tallawarra Stage B power station will be negotiated with the relevant approval authorities as part of the conditions of consent.

Photochemical modelling, including existing emissions from the Sydney Greater Metropolitan Region, predicted that additional emissions from Tallawarra A and B plants would have no adverse effects on regional concentrations of NO_2 and O_3 and would result in no additional exceedances of DECC air quality criteria.

Plume rise

The proposed Tallawarra Stage B power station is located approximately 4.8 kilometres to the northeast of the Illawarra Regional Airport. Due to the proximity of the proposed power station to the airport, there is a potential for the plume generated by the proposed power station to affect aviation safety. Aviation authorities have established that an exhaust plume with a vertical velocity in excess of 4.3 metres/second may cause damage to an aircraft frame or upset an aircraft when

flying at low levels. As such, CASA requires the proponent of a facility with an exhaust plume which has an average vertical velocity exceeding the limiting value of 4.3 metres/second at the aerodrome Obstacle Limitation Surface (OLS) or at 110 metres above ground level anywhere else, to be assessed for the potential hazard to aircraft operations. The OLS for Illawarra Regional Airport is 52 metres. If the plume rise assessment for both the Stage A and Stage B plants determine plume rise heights above the OLS (which is likely as the stack height of the approved Stage A plant exceeds this level) then an application for Operational Assessment of Proposed Plume Rise must be made.

A plume rise assessment was carried out and it found that the average plume would decrease to below the critical vertical velocity (4.3 m/s) at around 98 metres above the ground for a CCGT plant and 200 metres for an OCGT plant at the site. The maximum height reached by the plume before it decreases to below the critical vertical velocity was found to be 506 metres for the Stage B CCGT plant and 1,179 metres for the Stage B OCGT plant. Irrespective of the type of power station selected, the plume rise assessment has indicated that the horizontal displacement of the peak plumes would be minimal, with the plumes exceeding the critical vertical velocity generally confined to the area directly above the Tallawarra site.

On the basis that the plume rise does exceed the critical vertical velocity and the Illawarra Regional Airport has an Obstacle Limitation Surface of 52 AHD, an application will be made to the Civil Aviation Safety Authority for an Aircraft Operational Assessment. This assessment would assist in managing or reducing plume rise aviation risks by providing the pilots with information regarding areas of likely air disturbance so that these areas can be avoided.

Greenhouse gas generation

The greenhouse gas production from the proposed Stage B CCGT power station would represent approximately 0.28 percent of all sources of greenhouse gas emissions in Australia, based on 2005 emissions. For the proposed Stage B OCGT power station, the proportion of national greenhouse gas emissions resulting from the plant decreases to approximately 0.13 percent. The emission intensities of the proposed OCGT and CCGT plants are 750 CO₂-e/GWh and 465 CO₂-e/GWh, respectively.

This emission intensity of the proposed Tallawarra Stage B power station is low when compared to coal fired power stations around the country, some of which produce in the order of 1,400 tonnes CO₂-e/GWh. The emission intensity of the proposed Stage B CCGT plant is also low when compared to other CCGT plants across Australia.

The emission intensity of the proposed Stage B plant, irrespective of whether a CCGT or OCGT plant is constructed, would be compliant with the action contained within the *National Greenhouse Strategy*, which aims to lower the emission intensity associated with electricity production.

Noise

The existing noise environment in the vicinity of the proposed Tallawarra Stage B power station site is largely influenced by its proximity to Lake Illawarra, which is the main water body in the Illawarra catchment area. The surrounding area has a large residential population, the majority of which would be classified as urban or suburban, with some rural residential properties located further from the coast. In addition to the existing suburbs around the site and Lake Illawarra, residential development is also proposed for future development of the Tallawarra Lands site.

To assist in assessing potential noise impacts, noise monitoring was undertaken within the Tallawarra Lands site and at existing residential locations to the north and east of the proposed plant.

A review of the previous noise assessment for the Stage A plant enabled a comparison of the noise levels previously predicted for the plant and the noise levels predicted by the current noise modelling. The current modelling results were equal to or less than the predicted noise levels for the Stage A plant.

The noise modelling undertaken for the combined operation of the approved Stage A power station and the proposed Stage B power station (CCGT or OCGT) showed that at all receiver locations external to the Tallawarra Lands boundary, noise levels would be lower than the identified noise criteria, irrespective of whether a CCGT or OCGT plant is selected. The predicted noise levels at these external receivers would also remain lower than the relevant criteria when the 5dB(A) low frequency noise penalty is applied. Therefore, the proposed power station would comply with the Industrial Noise Policy.

At locations inside the Tallawarra Lands boundary, the operational noise levels would meet the criteria at some locations but would exceed these criteria when a low frequency noise penalty was included. Where the levels are above the criteria for a noise sensitive receiver within the Tallawarra Lands boundary, additional mitigation in the form of building design and other attenuation measures would be applied.

During the noise monitoring, construction activities were underway on the site for the Tallawarra Stage A CCGT plant. These activities were not audible from the residential monitoring locations during the attended noise survey. It is expected that the continuation of construction activities for the proposed Tallawarra Stage B plant would be of a similar noise level and therefore would not be audible at residential locations during normal construction hours.

Hazards and risk

A number of hazards associated with the proposed power station were identified to have the potential to impact upon adjacent off-site areas. The main hazards associated with the proposed power station include:

SINCLAIR KNIGHT MERZ

- Gas pipeline incident leading to gas leak as a result of external interference (i.e. excavation impact);
- Gas leak into the gas turbine enclosure, ignition and explosion/jet fire; and
- Diesel fuel storage bund fire.

Of the hazards identified for both the CCGT and OCGT plants and the subsequent preliminary analysis carried out, the risks associated with the proposed power station were deemed to be below the criteria published in the *Hazardous Industry Planning Advisory Paper No. 4: Risk Criteria for Land Use Safety Planning* as the proposed power station would be situated within land zoned for industrial (electricity generation) uses. Accordingly, the proposed development is classified as potentially hazardous and not hazardous under State Environmental Planning Policy No. 33: Hazardous and Offensive Industries and would therefore be permissible within the current land use zoning.

Water

The proposed Stage B CCGT power station would require additional water to supply the cooling towers. Potential sources for the cooling water include Lake Illawarra and potable water. Should the Stage B power station proceed as a CCGT plant, the required cooling water would be sourced from Lake Illawarra. The CCGT plant would employ a wet mechanical draft cooling tower as this option and, in comparison to other feasible cooling mechanisms, would minimise the water intake requirements and the thermal effects of the outlet discharge whilst maximising the efficiency of the power station.

The discharge from the Tallawarra Stage B CCGT plant would not exceed the ANZECC water quality guidelines, provided the lake input water is within the applicable guideline. In addition, the elevated salt concentration resulting from the Stage B discharge is expected to be within the threshold limit and the additional thermal load from the discharge is unlikely to have any additional ecological effects.

The project will result in only minor changes to the existing surface water management system and is not likely to have an adverse impact on the Yallah Creek or Lake Illawarra aquatic habitats and ecosystems.

Other Environmental Considerations

As the development will be sited within a highly disturbed area associated with the former coal fired power station, it is not expected that any threatened species, endangered ecological communities or known Aboriginal sites will be impacted upon by the proposal.

Statement of Commitments and Environmental Management

The environmental impacts of the proposal have been assessed in this Environmental Assessment and measures to manage those impacts have been outlined in the form of Statement of Commitments. These commitments, along with any conditions of approval issued by the Minister for Planning, would be incorporated into the detailed design.

To support the compliance with the Statement of Commitments, the commitments and management measures will be incorporated into the construction and operational Environmental Management Plans (EMPs) for the site. The EMPs would typically include:

- Approval conditions and statutory requirements;
- Environmental goals, environmental performance requirements and responsibilities;
- Plans for implementing mitigation measures;
- Environmental performance monitoring and auditing procedures; and
- Clear guidelines for emergency response and incident management plans and responsibilities.

The EMPs would include, where appropriate, safeguards developed during the detailed design phase of the project. The EMPs would become the reference documents that ensure the commitments for environmental protection and management in the EA and subsequent approvals are fully implemented. They would also serve as a framework for confirming the accuracy of impact predictions made in this EA and for measuring the effectiveness of mitigation measures.

Conclusion

The proposed Tallawarra Stage B power station and associated infrastructure represents a \$300 to \$500 million investment by TRUenergy to assist in securing electricity supplies in the region for the long term.

The choice of the site for the Tallawarra Stage B power station was based on surveys of all practical options and a decision based on the preferred option having the ability to utilise existing infrastructure associated with the Tallawarra Stage A CCGT power station, a relatively low overall cost, and good environmental and social outcomes compared with the other options. The use of the site chosen for the Stage B power station is consistent with the former and existing land use in the area and will not sterilise or affect future land uses in the area.

Key environmental issues were considered and potential impacts on those issues assessed. With the implementation of appropriate mitigation measures the residual impacts of the project would be low, and there is no environmental reason why the project should not proceed in the form described within this Environmental Assessment report.