



# Casino Gas Project and Richmond Valley Power Station



Project Application for  
Major Project Status  
including:

Application for  
Petroleum Production Lease and  
Application for  
Development Approval  
of Proposed Power Station



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# 1. Executive Summary

Metgasco Limited ("**Metgasco**" or the "**Company**") is developing gas and power supplies for eastern Australian energy markets. Over the past year, the Company has established the largest certified gas reserves in New South Wales at its coal seam gas project in the northern rivers region of northern New South Wales. Metgasco is now engaged in developing projects which will commercialise these significant gas reserves.

The Company's initial project is the development of a 30 Megawatt ("MW") gas fired power project to be located south of the town of Casino (the "**Richmond Valley Power Station**" or "**RVPS**"). The RVPS will be supplied by gas from the Company's adjacent coal seam gas field at south Casino (the "**Casino Gas Project**"). The combined capital value of these two projects is in excess of A\$50 million.

The Casino Gas Project is located within the Company's wholly owned tenement petroleum exploration licence or "**PEL**" 16. Metgasco's gas reserves are located in an area which does not have access to reticulated gas and receives power supplies from the national electricity market, with the closest NSW generators located approximately 600 km away.

The RVPS will meet the electricity requirements of the town of Casino and will be located approximately five kilometres south of the township of Casino. This site is on land zoned 1(b) Rural Secondary Agricultural Land within the planning approval area of the Richmond Valley Council. This site has been selected after extensive analysis of potential sites in the locality which has taken into consideration site specific costs and potential environmental impacts.

The purpose of this document is to provide a description of the Casino Gas Project and the Richmond Valley Power Station to enable the Minister for Planning ("**Minister**") to consider whether these projects should be considered a Major Project for the purposes of planning approval and, if so designated, to provide further information to the Company on the environment assessment criteria to be applied to these developments.

Should this project be considered a Major Project for planning approval purposes, Metgasco requests that the conversion from Petroleum Exploration License to Petroleum Production Lease ("**PPL**") under the *Petroleum (Onshore) Act 1991* required for the development of the Casino Gas Project and the development approval for the Richmond Valley Power Station are considered under Part 3A of the *Environmental Planning and Assessment Act, 1979*.

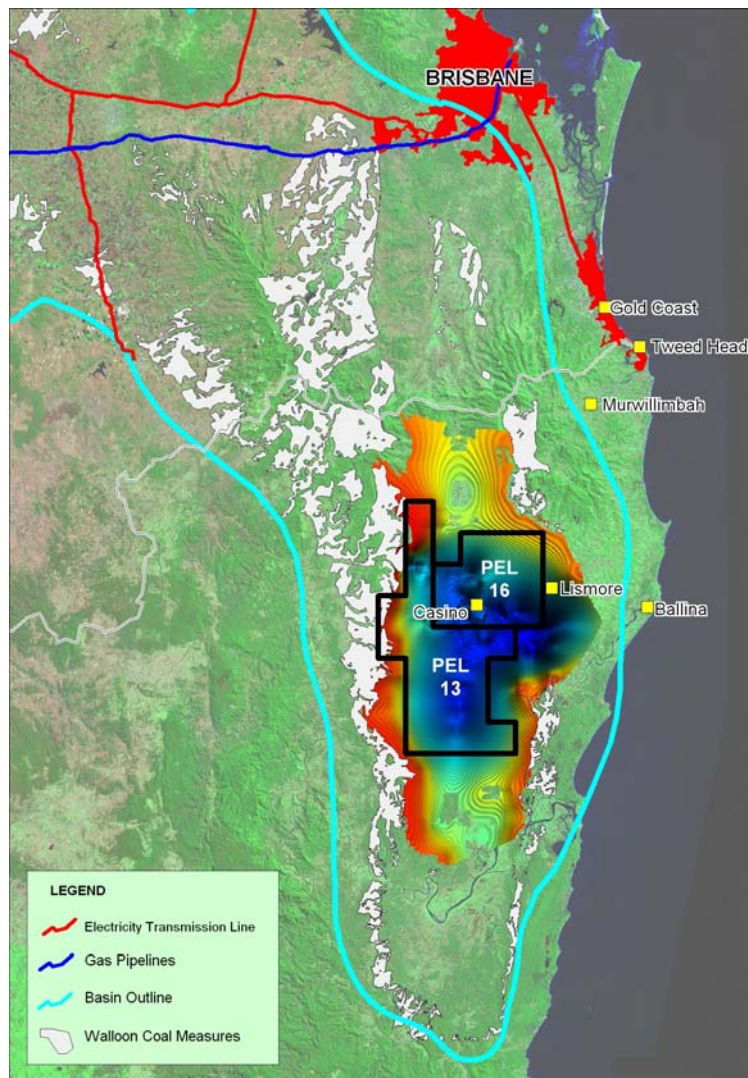
Metgasco intends to complete the Environmental Assessment Report for the Casino Gas Project and the Richmond Valley Power Station by November 2006. If Project Approval is granted by the Minister the Company intends to commence construction as soon as possible to allow the Richmond Valley Power Station to be in operation before the summer peak electricity demand of late 2007/08.

## 2. Introduction

### 2. 1. Information on Metgasco

Metgasco is an Australian energy company developing gas and power supplies for the eastern Australian energy market. The company was formed to explore for and appraise the hydrocarbon resources of the Clarence Moreton Basin in northern NSW. Metgasco's operations are located near Casino in northern New South Wales.

In 2004, the Company was listed on the Australian Stock Exchange. It currently has a market capitalisation of A\$24 million. The Company owns 100 per cent of PEL 16 in the Clarence Moreton Basin in north-east NSW. The following map illustrates the location of PEL 16 within the northern rivers region and its proximity to the high growth regions of northern New South Wales and south eastern Queensland.



Metgasco has drilled a number of successful development wells, which have established gas reserves in the area south of Casino. Metgasco now holds, through its interest in PEL 16, the largest certified gas reserves in New South Wales. Recently, independent US experts certified 1,080 billion cubic feet of possible gas reserves (3P) and 21 billion cubic feet of probable gas reserves (2P). The possible reserves are for approximately 60 per cent of the tenement area of PEL 16, while the probable reserves are just for one seam, in less than 10 per cent of the area of the tenement. The Company expects to expand gas reserves significantly over the next 12 months as additional drilling and wells are completed and production expanded.

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Metgasco recently farmed in to the adjacent permit to the south, PEL 13, where it has the right to earn up to 75 per cent of this PEL. The Company has completed detailed mapping of the petroleum basin in the Clarence Moreton basin and believes that it can quickly establish reserves in this PEL in a cost effective manner. This mapping work has identified the boundaries of the petroleum basin and established that Metgasco has access to over 90 per cent of the potentially productive coal seams in the basin.

Metgasco is currently developing projects which will commercialise these significant gas reserves. The initial project is the development of a 30 MW gas fired power project to be located at South Casino and associated coal seam gas field development. Gas will be supplied from the adjacent Casino Gas Project to the Richmond Valley Power Station.

It is intended that power will be delivered from the RVPS to the 66 kV Casino substation owned by Country Energy. This substation is located approximately three kilometres from the proposed power station site. It is further intended that power from the RVPS will be sold to the local electricity retailer. Country Energy has indicated that it intends to purchase all output from the RVPS for on sale to its regional customers.

## **2. 2. The Need for the Projects**

New South Wales consumes significant volumes of natural gas. Currently the majority of this gas is imported from the Gippsland basin or via the Moomba to Sydney gas pipeline. Metgasco is in the process of opening up a major new source of natural gas supply for the State.

The far north coast of New South Wales is the fastest growing region in the State. This is an area of the State which does not have access to reticulated gas nor any other local source of energy. Gas has been available in the Gold Coast and Tweed Heads region for over 15 years. However, despite relatively high rates of bottle gas usage, pipeline gas has not been made available to local communities in this area.

Power supplies to the far north of New South Wales are provided by electricity delivered from the National Grid from generation located 600 km to the south in the Hunter Valley or 250 km to the north in Queensland via the Directlink and QNI transmission links.

Demand for energy in this region has exceeded previous forecasts and new electricity capacity will be required either by way of embedded generation or network investment in order to meet projected electricity power load growth. ACIL Tasman has estimated that electricity demand within a 100 km radius of the Casino Gas Project is 450 MW and is forecast to grow to over 650 MW by 2010. Transgrid noted in its recent Annual Planning Review (2005) that *“This area is experiencing high population growth and a significant increase in the demand for electricity”* and that *“additional support to the area will be required to supply the growing load.”* Key benefits that will be delivered by local gas fired electricity generation are to:

- Improve the reliability of electricity supply in the Casino area;
- Improve the security and integrity of the regional electricity network;
- Avoid electricity line losses associated with transporting power over long distances to the northern rivers region; and
- Generate New South Wales greenhouse gas abatement credits (“**NGACS**”)

Metgasco is establishing a new energy industry within the northern rivers region with potentially significant employment and economic development outcomes. This region currently has the highest unemployment rate in New South Wales. Metgasco has created a number of new local jobs within the Company and within companies who are suppliers to our project. Metgasco expects that up to 60 jobs would be created during the development and construction phase of this project.

The major ongoing economic benefit of the project to the local community is expected to be through the supply of lower cost gas and reliable electricity to homes and businesses in the region. Gas from the Casino Gas Project is able to be supplied at a lower cost than bottled gas and could have a significant impact on reducing business costs in the region. In addition, the availability of gas may attract new businesses to the region which would not otherwise consider the Casino area.

## **2. 3. Metgasco Key Contacts**

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### 3. Project Description

The Application Project comprises two distinct but integrated parts;

The **Casino Gas Project**, representing an initial production development within PEL 16 and conversion to PPL to the south of Casino to extract coal seam gas; and

The **Richmond Valley Power Project**, representing the proposed 30 MW electricity generation facility to be constructed to generate electricity from gas produced from the Casino Gas Project for distribution into the regional electricity network.

The following indicates the proposed site for the RVPS:



#### 3.1. Casino Gas Project

The Casino Gas Project comprises the drilling and equipping of approximately 20 horizontal wells in coal seams and the subsequent production of gas and water to the surface. Gas and water are separated at the surface wellhead.

Gas is collected through a surface gathering system and delivered to the RVPS. Water is collected and stored in holding ponds to allow evaporation.

The key technical and project execution requirements of the development phase of the project are to:

- Increase reserves and productivity to meet the project requirements;
- Finalise a well location and field development plan;
- Complete engineering design of surface infrastructure including gas and water gathering systems and water disposal; and

- Complete engineering design of gas conditioning, measurement and custody transfer to the power station

In order to commercialise gas from the project the Company will require that the Petroleum Exploration License is converted to a Petroleum Production Lease.

The approval of conversion of the Petroleum Exploration License to a Petroleum Production Lease is typically the decision of the Minister for Mineral Resources. However, as the Petroleum Production License is a critical component of the development of the RVPS, Metgasco is proposing that requesting that the Casino Gas Project and the Richmond Valley Power Station be jointly considered as an integrated development for the purposes of Part 3A of the *Environmental Planning and Assessment Act, 1979*. Metgasco is in the process of negotiating access agreements with relevant land owners.

### **3. 2. Richmond Valley Power Station**

The Richmond Valley Power Project is a 30 MW gas fired power plant to be established in close proximity to the gas field development of the Casino Gas Project. The Power Project will comprise 10 x 3 MW gas reciprocating engines (or similar), which will be connected to the electricity grid. This power station will operate as a registered, non-scheduled, non-market generator under the national electricity rules. It is designed to operate on a 24 hour basis for 7 days a week (with a short annual maintenance shut down).

The key technical and project execution requirements of the development phase of the project are to:

- Complete engineering design for 30 MW generation facility;
- Complete engineering design for power transmission and connection to the local electricity network; and
- Complete engineering design for infrastructure and support (e.g. roads and maintenance)

## **4. Site Description**

### **4.1. Site Context**

The township of Casino, population approximately 10,000 lies on the banks of the Richmond River and is the largest urban centre within the Richmond Valley Local Government Area.

The area is linked to larger capital cities by the Sydney-Brisbane rail corridor and the Pacific Highway. Other major highways leading to Casino are the Bruxner Highway the Mount Lindsay Highway (via Summerland Way). The town is also serviced by interstate bus carriers and commercial airports in Lismore, Ballina and Coolangatta.

The control of development, building and subdivision in the locality is currently governed by the *Environmental Planning and Assessment Act 1979* and a mix of local, regional and State planning policies. The principle control is the Council's local environmental plan known as the *Casino Local Environmental Plan 1992*, which is supported by additional detail from a range of development control plans ("DCP"). The *North Coast Regional Environmental Plan*, and many of the State Environmental Planning Policies ("SEPP"), also applies to properties in different ways.

Other relevant legislation that regulate Council activities and development include the Local Government Act 1993, Roads Act 1993, Protection of the Environment Operations Act 1997, Companion Animals Act 1998, Crowns Lands Act 1989, Threatened Species Conservation Act 1995, Fisheries Management Act 1994, Native Vegetation Act 2003, Rivers and Foreshores Improvements Act 1948, Heritage Act 1977, Native Title (New South Wales) Act 1994, and Public Health Act 1991.

### **4.2. Site Location**

The Casino Gas Project and RVPS are located to the south and east of the town of Casino. The land upon which the project will be developed is predominately zoned 1(b) Rural Secondary Agricultural Land Zone and used for agriculture, mainly grazing with a small number of dispersed homesteads.

The site of the Casino Gas Project has been determined by the location of the identified gas reserves. Metgasco has evaluated a number of potential sites for the RVPS taking into consideration:

- The feasibility and cost of access to the electricity network;
- The feasibility and cost of infrastructure connection to the gas field development;
- Site access;
- Environmental factors relating to flooding in the Richmond Council Area;
- Initial flora and fauna assessment; and
- Initial noise level assessment.

This site has been selected as optimal after a consideration of the impact of all of these factors. The Company has given a great deal of consideration to the consequences of developing the RVPS in an area which is prone to floods and has developed a detailed flood protection strategy for the development. Metgasco is in negotiations with the owners of land in the target area for the RVPS and expects to enter into appropriate option agreements with landowners in relation to the RVPS site, access road and services easement.

### **4.3. Infrastructure for Casino Gas Project**

The Casino Gas Project will comprise approximately 20 horizontal wells, which allow delivery of gas and associated water to a number of surface wellheads. Each wellhead will occupy a small footprint (less than 10m<sup>2</sup>) and comprise a wellhead pump for water lift and control equipment.

Gas will be gathered at the wellhead at low pressure and delivered from individual wellheads into a central point for each cluster of wells (pods). Gas pipelines from wellheads to pods are likely to be surface laid polyethylene. Gas from pods will be delivered by pipeline to the RVPS. It is expected that the pipeline delivering gas to the power station will be buried.

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The Casino Gas Project is characterized by low water production rates and low salinity levels. Consequently, the Company considers that low volumes of water will result from the project.

Metgasco conducts weekly testing on water quality and the results have consistently identified water to be of stock quality (1,500 TDS ppm). This water therefore has some value to the land owner where the Company is conducting operations. Water will be separated at the wellheads as it is produced and either piped to "turkey nest" type ponds for evaporation or directly to end-users.

#### **4. 4.     *Infrastructure for Richmond Valley Power Station***

The Company's consulting engineers, Burns and Roe Worley have completed preliminary engineering design for the project. The RVPS is comprised of the following infrastructure elements, to be built at one location either on an elevated island or within a flood protection bund or levee bank.

The RVPS has been designed to provide a number of small gas fired generators to provide a high level of reliability for the local network. Front end engineering design is based upon 10 x 3MW gas reciprocating engines.

Generation will be at 11kV and transformed from 11kV to 66kV for supply to the local sub-station from where it will be supplied into the distribution network. A 40 MVA transformer will step up the voltage to 66kV for connection via a 66kV pole overhead line to the nearby Casino substation of Country Energy for distribution into the local electricity network.

#### **4. 5.     *Estimated Project Cost***

The current stage estimated integrated project cost is in excess of \$50 million up to the commencement of operations.

#### **4. 6.     *Project Construction***

Following receipt of all necessary approvals the construction of the RVPS is anticipated to take 12 to 15 months.

Metgasco will own and operate the Casino Gas Project. Well completions, procurement and equipping will be managed by Metgasco using both local suppliers and its own employees. The main components will be manufactured offsite and delivered to site for installation. Construction activities are minimal, possibly requiring a small concrete pad.

The gathering system design and procurement will be managed through Metgasco and final installation carried out under subcontract by an experienced contractor. Installation will require trenching and laying of pipelines, backfilling and installation of electrical controls at each well head to transmit telemetry data to a central control area.

The main components of the RVPS will be manufactured offsite and delivered to site for installation in modular / containerised form. The construction stage will include civil works to prepare the location of the generating station and switchyard, additional minimal earthworks for installation of power poles for the transmission line connection and construction of an access road.

#### **4. 7.     *Operation of the Projects***

Once commissioned, the Casino Gas Project and the RVPS will be in operation on a 24 hour, 7 days per week basis throughout the year. Maintenance will be scheduled to ensure minimal interruption to gas production and generation of electricity.

Metgasco will employ sufficient field staff and contractors from the local region to continue to manage and operate the Casino Gas project directly its life.

Metgasco expects that it will contract out the operations and maintenance of the power plant and network connection assets to a specialist contractor.

## 5. Legislative and Policy Context

### 5.1. State and Commonwealth Energy Policies

The Council of Australian Governments (“COAG”) established the Ministerial Council on Energy (“MCE”) in 2001 to deliver the economic and environmental benefits for Australia from implementation of the COAG national energy policy framework.

The MCE is the national policy and governance body for the Australian energy market, including for electricity and gas, as outlined in the COAG Australian Energy Market Agreement (“AEMA”) of 30 June 2004.

The Council’s objectives, as agreed by COAG are:

- To provide national oversight and coordination of policy development to address the opportunities and challenges facing Australia's energy sector into the future.
- To provide national leadership so that consideration of broader convergence issues and environmental impacts are effectively integrated into energy sector decision-making.

These objectives are set out in the AEMA and include:

*[to] further increase the penetration of natural gas, to lower energy costs and improve energy services, particularly to regional Australia, and reduce greenhouse emissions.*

In New South Wales, energy policy has been integrated within a range of economic and objectives.

In particular, the NSW Government has promoted gas fired generation over coal through the NSW Greenhouse Abatement Legislation and associated NGACs. The Casino Power Project will generate NGACs to support its economic attractiveness.

In addition, the Department of Energy and Utilities (“DEUS”) has directly promoted embedded generation by imposing levels of targeted network reliability on distribution network operators, all of which are owned by the NSW Government.

The RVPS is located within the Country Energy Networks distribution area. Metgasco understands that the RVPS will provide additional network reliability in the Casino and Lismore regions to the benefit of Country Energy Networks and possibly Transgrid.

### 5.2. Commonwealth Legislation

Part 3 of the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (‘EPBC Act’) provides that an action which

*“has, will have or is likely to have a significant impact on a matter of national environmental significance”*

may not be undertaken without prior approval from the Commonwealth Minister for the Environment and Heritage, as provided for under the provisions of Part 9 of the EPBC Act.

Metgasco will carefully consider each of the National Environmental Significance triggers under the EPBC for both the RVPS and the Casino Gas Project before determining whether the proposal will require referral to the Commonwealth Minister for the Environment. At this stage, Metgasco does not believe the proposal is likely to require assessment under the EPBC.

### 5.3. State legislation

*Environmental Planning and Assessment Act, 1979*

Clause 6 of State Environmental Planning Policy (Major Projects) 2005 (“**Major Projects SEPP**”) provides that, “development that, in the opinion of the Minister, is development of a kind: (a) that is described in Schedule 1 or 2, ... is declared to be a project to which Part 3A of the Act applies.”

Clause 24 of Schedule 1 of the Major Projects SEPP identifies electricity generation development (with a capital investment value of more than \$30 million), as a project to which

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Part 3A applies. The capital investment cost of the Richmond Valley Power Station exceeds \$30 million.

#### *Petroleum (Onshore) Act 1991*

The Minister for Mineral Resources is responsible for approving conversion of the Petroleum Exploration License to a Petroleum Production Lease under the *Petroleum (Onshore) Act 1991* unless approval is sought through the *Environmental Planning and Assessment Act, 1979*.

As Metgasco is seeking approval for conversion by this legislative path the Company has noted that Clause 75V of the *Amendment of the Environmental Planning and Assessment Act 1979* states that.. “approvals for a Production Lease under the Petroleum (Onshore) Act 1991 must be applied consistently”.

### **5. 4. Regional Planning Instruments**

The Site is located in an area which is subject to North Coast Regional Environmental Plan 1988 (“REP”) which provides for:

- the development of regional policies that protect the natural environment
- the encouragement of an efficient and attractive built environment
- productive yet sustainable development
- the consolidation of existing policies applying to the region
- the coordination of activities related to growth in the region, and
- and the initiation of a regional planning process that serves as a framework for identifying priorities for further investigation.

The REP also specifies a number of matters (outlined in a range of clauses) that councils are required to take into account when assessing and determining development applications or the preparation of local environmental plans. We would note that this project may be impacted by outcomes from the Department of Planning’s Draft Far North Coast Regional Strategy which is currently in development.

### **5. 5. Local Planning Instruments**

The Site is located in the Richmond Valley Council Local Government Area and is subject to the provisions of the *Casino Local Environmental Plan 1992* (“CLEP 92”), which is one of three local environmental plans that apply within the Richmond Valley Council area. The CLEP 92 applies to that part of the LGA contained within the area of the former Casino Municipality.

The CLEP 92 is the principle planning document covering the Casino locality and governs uses/developments that are permissible without Council consent, only with Council consent and that are prohibited.

A number of zones (“LEP Zones”) apply to the locality.

The Site is zoned rural 1B under IDO 15. IDO 15 adopts part of the Environmental Planning and Assessment Model Provisions 197 (‘Model Provisions’).

The Power Station Project comes within the definition of Generating Works under the Model Provisions. Development for the purposes of Generating Works is permissible with development consent in Zone No. 1 of IDO 15 and accordingly the Power Station Project is permissible with development consent.

## **6. Community and Stakeholder Consultation Plan**

### **6.1. Approach**

Consultations during the concept design and assessment phase of the development of the Project have focused on state and local government authorities and on those stakeholders, principally landholders likely to be directly affected by the proposal. Stakeholder feedback has been taken into consideration in the development of the project.

In the case of the Casino Gas Project, Metgasco has already completed 7 wells and has established good relationships through this process with the individual landholders affected and the local community on a wider basis.

In the case of the Richmond Valley Power Station, Metgasco has taken into account feedback from local landholders, the local council and Country Energy in the process of reviewing potential sites and selection of the preferred location.

Metgasco proposes to continue to carry out a comprehensive community consultation program with stakeholders during the environmental assessment process.

### **6.2. Community Consultation**

Metgasco has held two open community consultation sessions on the Casino Gas Project in December 2004 and February 2005. Prior to the second meeting a notice of meeting was placed in local papers and invitations to attend the meeting were sent to local landowners, community organizations and other interested parties.

There have been regular consultations with Richmond Valley Council. Key matters raised have been:

- the desire of the community to be involved in ongoing consultation on the project;
- the environmental impact of operating the field within a flood plain;
- access to land and impact on land values in the area; and
- approach to water handling.

Metgasco has held numerous meetings with adjacent landowners. It is proposed that further meetings are conducted inviting any local interest groups that are identified to contribute to the consultation process. In addition, Metgasco intends to keep the local community informed through advertisements in the local press.

### **6.3. Future Consultation plans**

Metgasco intend to continue to conduct meetings with all adjoining landowners during the consultation process as well as with any local interest groups that are identified.

It is intended that a planning focus meeting is undertaken prior to commencing the environmental assessment process for this project.

Metgasco already has a locally based communication strategy through press and other media. In addition advertisements will be placed in the local press inviting comment and providing contact details to inform a wider audience.

## **7. Initial Assessment of Matters for Environmental Assessment**

### **7.1. Proposed Approach**

So that the entire impact of the overall development can be understood and managed it is proposed that the assessment of the environmental impacts of the Casino Gas Project and the RVPS be undertaken through a single process.

Each element of the integrated project has different key environmental issues which have been identified.

For the Casino Gas Project, key environment issues are likely to be:

- Water management procedures;
- Noise impact from drilling activities and compressor operations; and
- Traffic impact.

For the Richmond Valley Power Project, key environment issues appear to be:

- Hazard management;
- Noise impact from construction activity and ongoing operations;
- Visual amenity; and
- Air quality.

The initial assessment of relevant environmental issues is discussed below.

### **7.2. Casino Gas Project**

The gas field development will extend the existing drilling operation in PEL 16 from the current 7 wellhead sites covering an area of 2.5 km<sup>2</sup> to 20-30 wellhead sites over an area of 2.8 km<sup>2</sup>. No significant environmental issues relating to the current drilling program have been identified to date. Metgasco's preliminary environmental assessment for the Casino Gas Project has been based upon this experience in drilling within the area that will form part of the total development project.

#### **a. Water management**

Water from the coal seam is currently being extracted and handled in an environmentally sound manner. This water is not from the shallow water table, which is approximately 10-15 metres below the surface, but is extracted from coal seams at a depth of 500 - 600 metres. A series of shallow water table monitoring bores drilled close to and at a distance suggests that water extraction from the coal seams at depth has had no effect on the water table. The quality of water from a coal seam gas project can vary from drinkable to saline depending on the project. Evaporation, re-injection into deeper aquifers, flows into natural drainage or local use have all been applied to water disposal from coal seam gas projects overseas and in Australia.

The Casino Gas Project does not produce large volumes of water. Typical water production rates are approximately 20 litres of water per well per day.

Water from the Casino Gas Project has been tested on a regular basis over the past 2 years. It has consistently tested as suitable for consumption by stock (slightly to moderately saline).

Metgasco has built a holding dam on site to retain water from its test production program. Metgasco intends to provide further water analysis in the environmental assessment. Discussions with local stockholders will be progressed before finally selecting the method of disposal but preliminary analysis indicates there should not be an environmental risk through the production and disposal of such small quantities of water.

## **b. Soil and geology**

Experience in the drilling and production testing process has not identified any environmental issues. Whilst there may be potential for changes in settlement as a result of dewatering the coals, this is unlikely to impact upon nearby residences.

Metgasco will consider the potential for geological disturbance as a result of dewatering of fracture seams as part of its environmental assessment.

## **c. Flora and fauna**

Existing activities within PEL 16 have not identified any environmental issues in respect of native flora or fauna across the area. Metgasco intends to undertake a flora and fauna survey as part of the environmental assessment.

## **d. Indigenous and historic heritage**

There are no known heritage listed items in the PEL 16 area for development south of Casino.

A cultural heritage assessment to address indigenous and historic issues will be presented in the environmental assessment along with mitigating measures to minimise the impact on identified heritage items.

## **e. Noise impact**

The Company intends to conduct an assessment of the construction and operational noise impacts. An initial survey of base noise levels at the proposed site has been conducted and an assessment of the area of impact of noise has been conducted.

## **f. Air quality**

The Company does not anticipate that the Casino Gas Project will have any significant impact on air quality. However, it proposes to conduct an evaluation of this potential risk factor.

## **g. Hazard management**

Both the Casino Gas Project and the Richmond Valley Power Station are within the 1 in 100 year flood plain. A flood plain risk management plan has been produced for the Casino area and is Council's adopted policy for development in flood prone areas. The plan is supported by a formal flood study. It recommends a series of strategies to mitigate the impacts of flooding.

Under the floodplain risk management plan, development can occur on ground that is affected by the 1 in 100 year flood event but residential habitable floor levels must be at least 500mm above this event, with lesser standards applicable to Commercial and Industrial development.

Metgasco has developed initial strategies for flood protection for both the Casino Gas Project and the RVPS.

## **h. Traffic impact**

Heavy vehicles are moved on and off site before, during and after drilling activities are undertaken to allow for delivery and removal of materials and equipment. Drilling rigs are typically only moved on and off site occasionally. Ellangowan road is the main access road to the site and has been used to date to conduct field activities.

Metgasco has completed a preliminary analysis of impact on traffic on the development of the gas field and will undertake more detailed analysis during the environmental assessment process.

## **7. 3. Richmond Valley Power Station**

### **a. Hazard management**

As described above the Richmond Valley Power Station is within the 1 in 100 year flood plain. The Company has given a great deal of consideration to the consequences of developing the RVPS in an area which is prone to floods and has developed a detailed flood protection strategy

for the development. The cost of developing the RVPS on an alternative site has been assessed against the costs and risks of developing the project on the selected site.

The Company intends to manage the risk of a flood event by either building the project on an elevated island or constructing a bund or levee wall around the RVPS to a height which is a reasonable margin above (minimum 0.5 metres) a 1 in 100 year flood event. The Company has evaluated alternative flood mitigation strategies and at this stage considers that the bund approach is preferable on a number of grounds. However, both options will be considered in further detail during the environmental assessment process.

### **b. Noise impact**

The sound generated from gas engines has the potential to affect nearby receptors if it is unmitigated. The development footprint is located at least 1km from the nearest receptor with about a small number of residences located between 1km and 3km from the boundary of the development footprint.

Given the significant distance between the boundary of the development footprint and the nearest receptors and combined with the use of mitigation measures including containerisation of the gas engines and potentially acoustic shielding, it is anticipated that the RVPS will have a minimal impact on the nearest receptors.

A detailed noise assessment will be included in the environmental assessment, which will identify mitigation measures to ensure appropriate noise guidelines are met.

### **c. Visual amenity**

The proposed site is located three kilometers from the Ellangowan road and is unlikely to be visible from the road. Metgasco considers that the construction of a bund around the RVPS (which is the preferred flood mitigation strategy) will assist in improving visual amenity further as vegetation will be placed on the bund banks. The bund will also assist further with noise mitigation. Further assessment of the visual impact of the project and mitigation strategies will be undertaken in the environmental assessment.

### **d. Air quality**

Gas fired power stations typically emit by-products of combustion including: carbon dioxide, carbon monoxide and nitrogen oxides. Metgasco intends to undertake a technical review of the emissions from the RVPS as part of the environmental assessment process and to identify mitigation strategies to minimize the impact of the project on air quality.

### **e. Flora and fauna**

The RVPS is proposed to be located in existing cleared paddocks. Preliminary flora and fauna surveys indicate no habitat of ecological significance occurs in the area where the RVPS is intended to be located.

A detailed flora and fauna assessment will be undertaken along with mitigating measures to ensure that development will be undertaken with environmental sensitivity and EEC vegetation removal is avoided.

### **f. Indigenous and historic heritage**

There are no known heritage listed items in the PEL 16 area for development south of Casino.

A cultural heritage assessment to address indigenous and historic issues will be presented in the environmental assessment along with mitigating measures to minimise the impact on identified heritage items

### **g. Land use and economic development**

The physical footprint of the Power Station Project will comprise less than 1 hectare. The proposed site and environs are currently used for grazing and cropping purposes.

Given the relatively small footprint of the Richmond Valley Power Station and the buffer zones between the footprint and adjacent building or residences any land use impact or socio-economic impact is likely to be minimal.

#### **h. Traffic impact**

Heavy vehicles will move onto site during construction to deliver materials and equipment. Ellangowan road is the main access road to the site and has been used to date to conduct field activities.

Metgasco has completed a preliminary analysis of impact on traffic on the development of the RVPS and will undertake more detailed analysis during the environmental assessment process.