

# Spring Gully Power Station Project

## Community Update

November 2005

The Environmental Impact Statement (EIS), for the proposed Spring Gully Power Station Project will be available for public comment from 12 November 2005.



Artist's impression of the proposed 1000MW power station adjacent to the existing gas plant (looking north).

### Background

Origin Energy has now completed the studies for the Environmental Impact Statement (EIS) for its proposed 1,000MW power station project at Spring Gully. If approved by the regulatory agency and the Origin Energy Board, the proposed project would be developed as two 500MW stages.

This Community Update provides summaries of the studies. Full details are available in the EIS.

### Study 1: Visual impact

The visual study, conducted by URS, involved assessing the proposed power station's visual impact from key vantage points (e.g. nearby homesteads, roadsides and elevated areas).

The main visual components of the power station (and their heights) would include the exhaust stacks (35m), turbine shelters (20m) and the heat recovery steam generators (24m).

The level of visibility would be low due to the screening effect of vegetation, landform and the relatively long distance views.

The level of visibility of the power station from sections of the Roma-Taroom Road and Wybara Road would be relatively low, as potential views would generally be blocked by roadside vegetation and local landforms. Overall, the visual impact of the proposed power station was assessed as low.

## Study 2: Air quality

Environmental consultants, URS Pty Ltd, undertook detailed modelling to predict the impact on air quality in the vicinity of the proposed power station under a range of operating and meteorological conditions.

The main air emissions will result from the combustion of gas in the gas turbines. These include water vapour, oxides of nitrogen (NOx), carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).

NOx and CO are classified as pollutants and must be below health-based concentration limits. These are tightly regulated and monitored by the EPA. CO<sub>2</sub> is a greenhouse gas and its impact is considered in a separate study.

Results of modelling studies show that the predicted concentrations for all emissions modelled would be well below the relevant ambient air quality standards at neighbouring properties. Consequently, the power station would not be considered to have a detrimental impact on air quality.

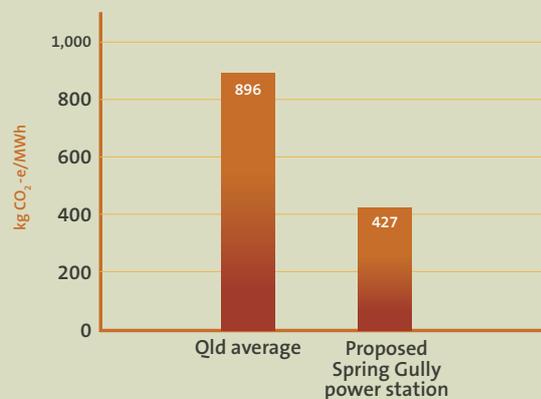
## Study 3: Greenhouse gas emissions

The study of predicted greenhouse gas (GHG) emissions from the construction and operation of the project was conducted by URS. For study purposes, a worst case GHG emissions scenario (continuous base-load power station operation) was assumed.

Origin Energy intends to use combined cycle technology, where waste heat is captured and used to generate additional electricity. This is considered best practice by maximising energy efficiency and minimising GHG emissions per unit of power generated.

On this basis, URS found that the power station would be expected to emit approximately 50% less GHG emissions per unit of electricity produced, compared with the average GHG emission intensity for Queensland.

### Greenhouse gas emission intensity



Comparison of expected greenhouse gas emission intensity between Origin Energy's proposed power station and the current Queensland average.

Emission intensity based on calculations using Table 5, Australian Greenhouse Office Factors and Methods Workbook, August 2004.

## Study 4: Water

Water produced from the nearby coal seam gas (CSG) wells would be used for cooling in the proposed power station. The evaporation of water in the cooling towers will result in the area of the evaporation ponds being reduced to approximately 40% of the area that would otherwise be required.

Water from the cooling tower and water treatment facilities would be returned to the CSG evaporation ponds.

An application has been made to Department of Natural Resources & Mining (DNRM) to use water from the existing Precipice bore for domestic use and steam system make up.

Run-off from processing areas would be contained and checked for contamination before being sent to the CSG evaporation ponds or to the normal drainage system via a sediment retention pond.



Aerial photograph of Evaporation Pond A, Spring Gully.

## Study 5: Flora and fauna

A flora and fauna assessment was undertaken by URS to provide data on the presence of species and potential habitats occurring within and near the proposed power station site. Field studies and desktop reviews of existing information were employed to:

- identify the area's conservation values
- assess the potential impacts from the proposed power station's construction and operation
- develop appropriate management strategies for the mitigation of potential impacts.

The study found that the impact of the project on flora and fauna would be low. No critical habitats or species of conservation significance were identified at the proposed power station site.

The study recommends Origin Energy implement a flora management strategy during construction, to control weeds and clear vegetation to prevent any unnecessary disturbance to local habitats.



Proposed power station site on left of existing gas plant (looking south).

## Study 6: Cultural heritage

The cultural heritage study involved:

- determining the presence of any Aboriginal and historical cultural heritage values that may be affected by the project
- recommending management options to mitigate or minimise any identified adverse effects.

Origin Energy and the Iman People have agreed a Cultural Heritage Management Plan for the proposed project, as set out under the Aboriginal Cultural Heritage Act 2003.

Heritage specialists Bonhomme Craib and Associates and Iman representatives undertook a comprehensive field investigation of the proposed power station site during which a number of isolated stone artefacts were identified and relocated.

The proposed power station would not impact on any of the sites identified in the Historical Assessment undertaken for the CSG project.

Procedures for the discovery of unrecorded Aboriginal cultural material would be implemented during construction and Iman representatives

would be onsite during earthworks to ensure that any additional Aboriginal cultural material unearthed is appropriately managed.



Cultural heritage inspection during soil sampling at power station site.

## Study 7: Social impact

The social impact assessment was also conducted by URS. The study considered workforce and accommodation requirements, and the impact of the project on community facilities.

### Construction Phase

- Workforce for the first 500MW stage is estimated to average 200 personnel over 30 months, peaking in month 20 with approximately 400 personnel
- Construction workforce would be housed in an on-site construction camp
- Workers would be transported to and from Roma by bus at the start and end of their work roster.

### Operations phase

- Approximately 30 operational personnel would be required, with up to 17 rostered on site at any one time
- Initially, an experienced operations workforce would be flown in from major centres, with the intention of establishing a permanent operations workforce in Roma as quickly as possible
- Additional demand for education, health, social and recreational services generated by the project is expected to be within existing community capacity
- Overall, long and short term employment opportunities (including apprenticeships) and sourcing goods and services should have a positive economic benefit for the region.

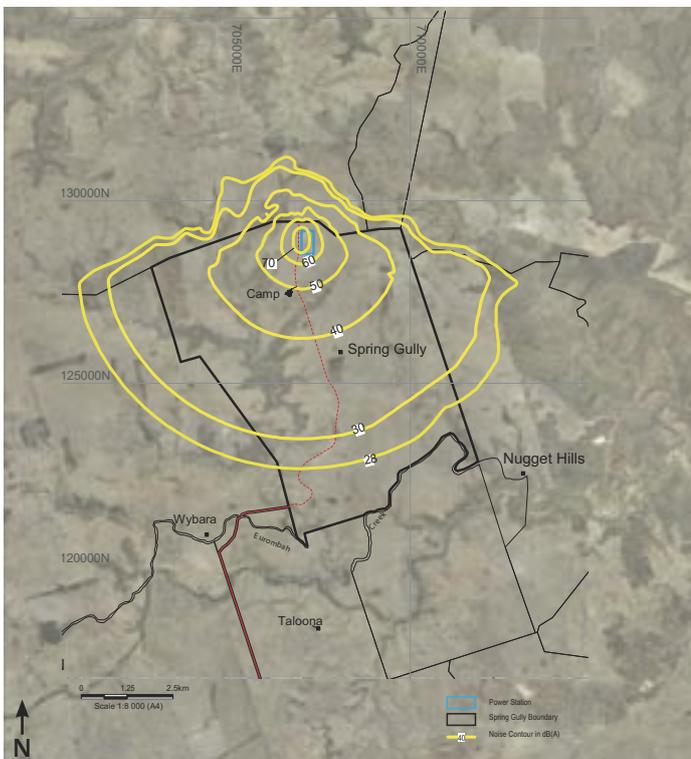
## Study 8: Noise

The environmental noise study was conducted by specialist noise consultant, Sonus Pty Ltd.

Previous measurements of the existing acoustic environment have indicated that the background noise levels within the area are very low. As a result, Sonus applied the most stringent criteria of the Environmental Protection Authority (EPA) guidelines.

The study involved the prediction of noise from the proposed power station to the closest residences under worst case weather conditions. Sonus found that the proposed power station is capable of meeting the EPA guidelines.

A post construction measurement procedure has been recommended to ensure that the final design complies with the guidelines.



Noise predictions under worst case weather conditions scenario experienced by residences to the south of the proposed site (six gas turbine power station configuration).

*This image incorporates data which is © Commonwealth of Australia (Geoscience Australia) 1990. Source: Roma (aerial photo) supplied by Fugro Spatial Solutions Pty Ltd 2003. Image acquired 24/10/2002.*

### Contact

Alison John  
Roma Superintendent  
Origin Energy (Coal Seam Gas)  
Ph (07) 4622 2244

Wayne Gregory  
National Manager Public Affairs  
Origin Energy  
Ph (03) 9652 5886



## Study 9: Roads and traffic

The roads and traffic study was undertaken by Eppell Olsen and Partners. It involved:

- an inspection and review of the existing road network between Roma and Spring Gully
- estimating likely traffic due to power station construction and operation
- identifying road improvements that would be required as a result of the project and those that would be required regardless of the project.

In terms of traffic volume, the study found that:

- proposed work rosters during power station construction would not generate significant amounts of light vehicle traffic
- heavy vehicles and buses would be used to bring materials and workers to site (two return bus trips to Roma per day at peak construction and an average of seven truck deliveries per day over 24 months)
- an estimated total of 30 over-dimensioned sized vehicles would travel to site during construction
- once the plant is operational heavy vehicle movement would average seven trucks or vans per day / five days a week.

In terms of road pavement, the study found that:

- Wybara Road should be sufficient to accommodate power station traffic
- the additional traffic generated by the power station project may bring forward the need for rehabilitation of the Roma-Taroom Road by less than a year.

## How you can get involved

The EIS will be available for public comment from 12 November to 9 December. The Coordinator General will place advertisements in local and metropolitan newspapers notifying the community that the project's EIS may be viewed at:

- Origin Energy's website [www.originenergy.com.au/springgullygenerator](http://www.originenergy.com.au/springgullygenerator)
- The Coordinator General website [www.sdi.qld.gov.au/springgully](http://www.sdi.qld.gov.au/springgully)
- Bungil Shire Council, 1 Cartwright Street, Roma
- Roma Library, Hawthorne Street, Roma.

Comments and submissions on the EIS may be made to:

Project Manager – Spring Gully Power Station Project  
Project Delivery  
The Coordinator General  
PO Box 15009  
City East QLD 4002  
Tel (07) 3238 3114 Fax (07) 3225 8282

The Coordinator General will take into account all public submissions prior to making a recommendation for development approval by the Bungil Shire Council.