P R O J E C T A P P L I C A T I O N

Proposed Gas Fired Peaking Power Plant at Parkes, NSW

Prepared for

International Power (Australia) Pty Ltd

6 October 2006

43177456

URS

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This is a Preliminary Environmental Assessment Report prepared under the provisions of Part 3A of the *Environmental Planning and Assessment (EP&A) Act 1979* for the development of a gas fired peaking power station facility approximately 10km west of Parkes in central western NSW. The purpose of this document is to provide sufficient information on the proposed project and its potential environmental impacts to allow the NSW Department of Planning to issue environmental assessment requirements for a project approval.

The project proponent is International Power (Australia) Pty Ltd (IPRA) - a wholly owned subsidiary of International Power plc, a UK-based independent power generation and operation company. Since establishing in Australia in 1996, IPRA has invested in excess of A$5 billion and owns and operates power plants in Victoria, South Australia and Western Australia together with other energy-related businesses.

The project proposal is in response to the "Needs Statement" issued in March 2006 by TransGrid which outlined high voltage transmission system constraint scenarios in the Cowra/Forbes/Parkes area. TransGrid sought generation proposals as alternatives to augmenting its regional grid. The Parkes 120MW power station (Parkes Peaking Power Plant) as proposed by IPRA is the most cost efficient and effective generation solution for the identified constraint scenarios.

The proposed Parkes Power Plant comprises three separate 40MW generating units operating in open cycle mode and capable of running individually or in conjunction, together providing a high level of reliable generation capacity embedded within the region. The Power Station will utilise gas-fired generators with dual fuel capability using natural gas as the primary fuel and distillate as an alternate (backup) fuel to provide security of generation during periods of interrupted gas supply.

It is anticipated that the Parkes Peaking Power Plant would operate as a "peaking plant", generating on an as-required, intermittent basis for a total maximum period of up to 10 % of any year. Gas would be supplied from an off-take from the existing Central West Pipeline at Parkes.

In lieu of taking water from available potable supplies, IPRA will (if technically feasible) install water treatment facilities capable of treating effluent from the Parkes sewerage treatment works for process use in the plant. This is presently under investigation and it appears that there is sufficient grey wastewater available to meet all plant process requirements.

IPRA is committed to meeting its environmental and community obligations throughout this process and undertaking a consultation program with stakeholders during the environmental assessment process.

The project would take approximately 6 months to build at an estimated cost of $50 million.

1.1 Project Overview

This is a Preliminary Environmental Assessment Report prepared under the provisions of Part 3A of the *Environmental Planning and Assessment (EP&A) Act 1979* for the development of a gas fired power station facility at a site in Parkes. This document has been prepared by URS on behalf of International Power (Australia) Pty Ltd (IPRA).

On the 26 September 2006, IPRA advised the Department of Planning of their intention to seek approval under Part 3A of the Act and URS, and have sought confirmation that State Environmental Planning Policy 2005 (Major Projects) applies to the project.

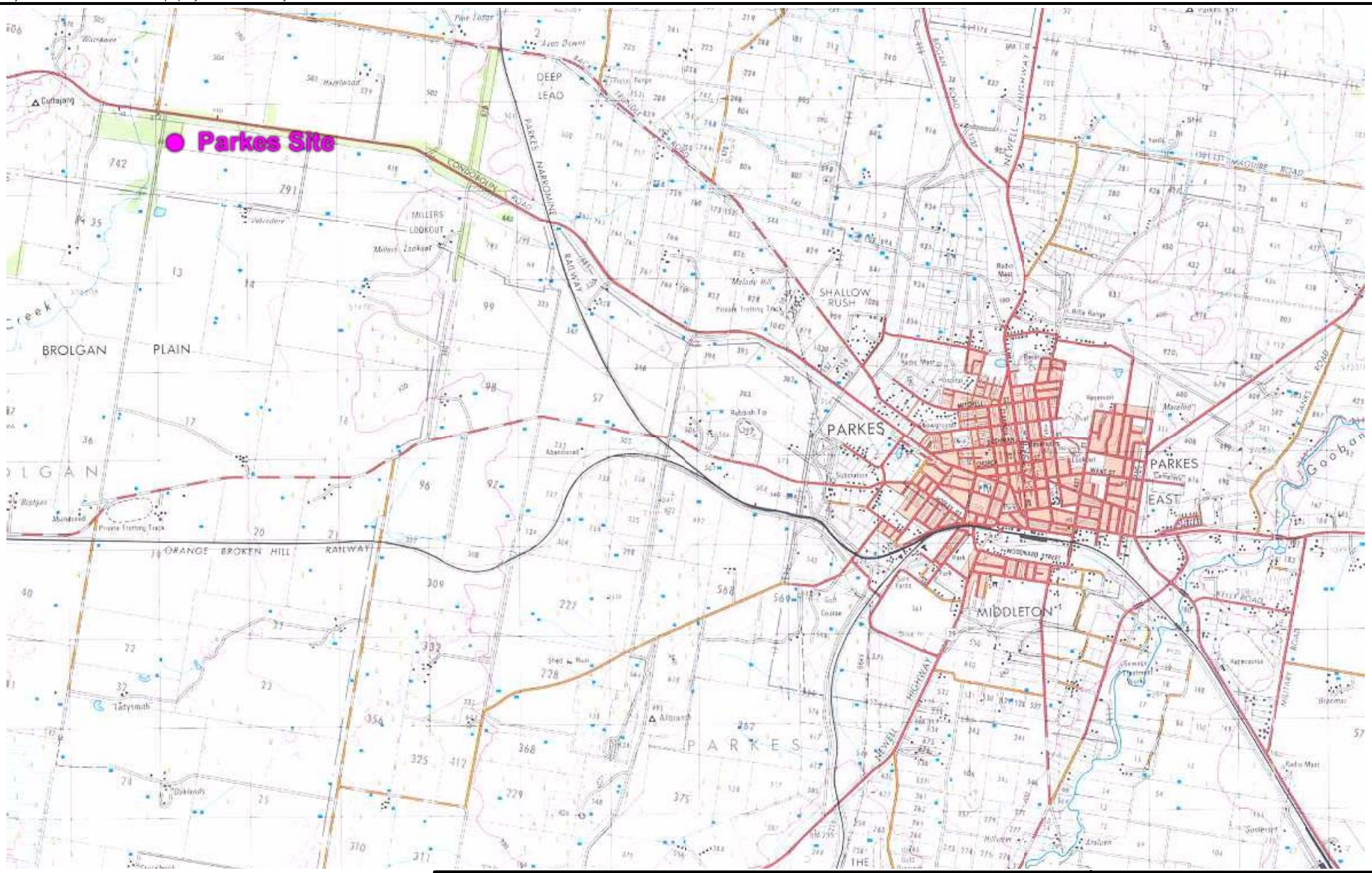
The purpose of this document is to provide sufficient information on the proposed project and its potential environmental impacts to allow the NSW Department of Planning (DoP) to issue environmental assessment requirements for a project approval of the Parkes Peaking Power Station Plant, in accordance with Part 3A of the EP&A Act. This document, therefore, also acts as a formal request for the environmental assessment requirements.

This Project Outline and Preliminary Environmental Assessment has been structured to provide general environmental, cultural and socio-economic information about the project context and the site under consideration Further information about the development will be provided in the form of a detailed. project application.

The proposal comprises the development of a gas turbine power station facility and associated infrastructure at a site adjacent to Condobolin Road approximately 10km west of Parkes, in central western NSW. The location of the site is shown in **Figure 1-1**. The proposed facility would have generation capacity up to 120MW, comprising three separate 40MW open cycle generating units capable of operating individually or in conjunction, together providing a high level of reliable generation capacity embedded within the region.

The facility will comprise gas-fired plant with dual fuel capability using natural gas as the primary fuel and distillate as an alternate (backup) fuel to provide security of generation during periods of interrupted gas supply. It is anticipated that the Parkes plant would operate in a “peaking role”, that is, on an as-required, intermittent basis for a total maximum period of up to 10 % of any year. Gas would be supplied from an off-take from the existing Central West Pipeline at Parkes. IPRA has finalised arrangements with the landholder to secure the land for the power plant and is well advanced in securing easements for the gas pipeline route.

The project would take approximately 6 months to build at an estimated cost of $50 million.



Source: TOPOGRAPHIC MAP - LAND AND PROPERTY INFORMATION NSW

Client: INTERNATIONAL POWER (AUSTRALIA) PTY LTD	Project: PRELIMINARY ENVIRONMENTAL ASSESSMENT - PARKES PEAKING POWER STATION	Title: **SITE LOCATION**
URS	Drawn: BH; Approved: NB; Date: 9/2006	Figure: **1-1**
	Job No: **43177456**; File No: 43177456.002	

1.2 Proponent

The proponent[1] is International Power (Australia) Pty Ltd (IPRA), a wholly owned subsidiary of International Power plc, a UK-based independent power generation and operation company. International Power plc has interests in 37 power stations in 18 countries around the world and is listed on both the London and New York Stock Exchanges and has a current market capitalisation in excess of A$11bn. Further information on International Power plc and IPRA is available on its website www.ipplc.com

Since establishing in Australia in 1996, IPRA has invested in excess of A$5 billion and focused on becoming a leading player in the energy industry. The company owns and operates more than 3600MW of renewable, gas-fired and brown coal-fired generating plants in Victoria, South Australia and Western Australia. Its interests also extend across energy retailing (Energy Australia) and the (SEAGas) gas pipeline between Victoria and South Australia as shown in Table 1-1.

Table 1-1
IPRA Australian Energy Assets

Asset	Fuel / Type	Gross Capacity MW	Net capacity MW
Hazelwood, Victoria	Coal	1,600	1,500
Loy Yang B Power Station, Victoria	Coal	1,000	700
Synergen Peaking Units, South Australia	Gas/Distillate	360	360
Pelican Point Power Station, South Australia	Gas (CCGT)	487	487
Canunda Wind Farm, South Australia	Wind/renewable	46	46
Kwinana Power Station, Western Australia	Gas (CCGT)	118	58
SEA Gas underground pipeline	n/a	n/a	n/a
Energy Australia	n/a	n/a	n/a
Total		**3,611**	**3,149**

IPRA employs some 1000 Australians across its national business and is an innovative and proactive company, highly regarded in the industry as a project developer and as an asset manager.

[1] IPRA or a special purpose related body corporate

1.3 Project Need and Justification

TransGrid released its "Needs Statement" for the Cowra / Forbes / Parkes area in March 2006 (Statement). This Statement outlined high voltage transmission system constraint scenarios in the Cowra/Forbes/Parkes area and concluded that there are a number of system constraints in this area. The Statement noted that possible options to overcome these limitations need to be developed to either increase the network capacity or reduce the loading on crucial network elements. TransGrid (2006) state that

> *"Load reductions can be achieved by reducing electricity usage at critical times or generating electricity 'downstream' of the critical network elements (close to where it is used)".*

Further, TransGrid states that

> *"Possible options must be capable of reducing network loading or increasing network capacity during periods of high load in summer…Possible options should preferably be in service at times of high demand…They should also utilise proven technology and be capable of being installed and operating by the required date."*

The required operational dates are summer 2009 / 2010 (TransGrid 2006).

IPRA proposes to meet the requirements identified in TransGrid's Needs Statement through their proposal for the Parkes Peaking Power Plant with a nominal capacity of 120MW comprising three 40MW open cycle gas fired generating units with dual fuel capability and therefore able to use distillate as backup fuel to ensure continuity of generation during gas supply interruptions. These units will be capable of operating individually or in conjunction, together providing a high level of reliable generation capacity embedded within the region. This multi-unit concept provides a reliability factor in excess of 99% on an annual basis.

It is anticipated that the Parkes peaking Power Plant would operate as "peaking" plant - that is, generating power intermittently on an as-required basis for a total maximum period of up to 10 % of any year.

The multi-unit Parkes facility concept also offers significant regional reinforcement in the event of extensive transmission system problems. The facility would be capable of providing the full 120MW of capacity until such time as the transmission system can be stabilised, at which point Parkes would resume its normal peaking role.

1.4 Project Benefits

The location has been chosen to best meet IPRA's non-commercial project objectives, these being to:

- provide solutions to the TransGrid 132kV transmission system constraint scenarios;
- minimise (visual, air emission, noise and traffic) community impacts;
- optimise connectability to both the TransGrid and the Country Energy electricity systems;

- optimise flexibility for TransGrid in managing its regional HV grid systems;
- avoid or defer for an extended period, any need for Country Energy to augment its existing local Parkes 66kV system;
- contribute to inter/regional supply security and meet load growth through connection to the National Electricity Market;
- be gas fired both as a preferred fuel type under IPRA's environmental policy and also to qualify for NSW Greenhouse Abatement Certificate (NGAC's);
- be dual fuelled to ensure reliability during interruption to gas supplies; and
- include, wherever possible, recycling of consumables, particularly water;
- comprise multiple generation units to ensure reliability;
- be sized to operate in the short to mid term as peaking plant so as to both:
  - reflect the TransGrid constraint scenario need; and
  - minimise gas demand to a responsible level of consumption.

The 120MW Parkes Peaking Power Plant as proposed by IPRA is the most cost efficient and effective generation solution for constraint scenarios identified by TransGrid whilst also meeting IPRA's broader environmental and community-focused objectives.

The Peaking Power Plant is being proposed to provide network support to TransGrid's high voltage transmission network by providing local power generation capability during periods of peak demand at a critical location in the NSW grid, as identified by TransGrid network planning reports. The Peaking Power Plant will provide a highly resource-efficient solution for the identified network limitations and will defer significant capital expenditure to otherwise augment or reinforce the respective local transmission networks.

Further to the above objectives, IPRA has initiated a number of actions, including:

- in securing land for the power station and being well advanced in securing easements for the proposed gas pipeline;
- initiating commercial negotiation of fuel supply and transport arrangements;
- commencing preliminary, environmental, heritage and other studies;
- commencing preliminary design and investigating sourcing of suitable generating plant;
- initiating a request for grid connection studies by TransGrid; and
- initiating discussion with Parkes Council with regard to the use of recycled effluent water at the plant.

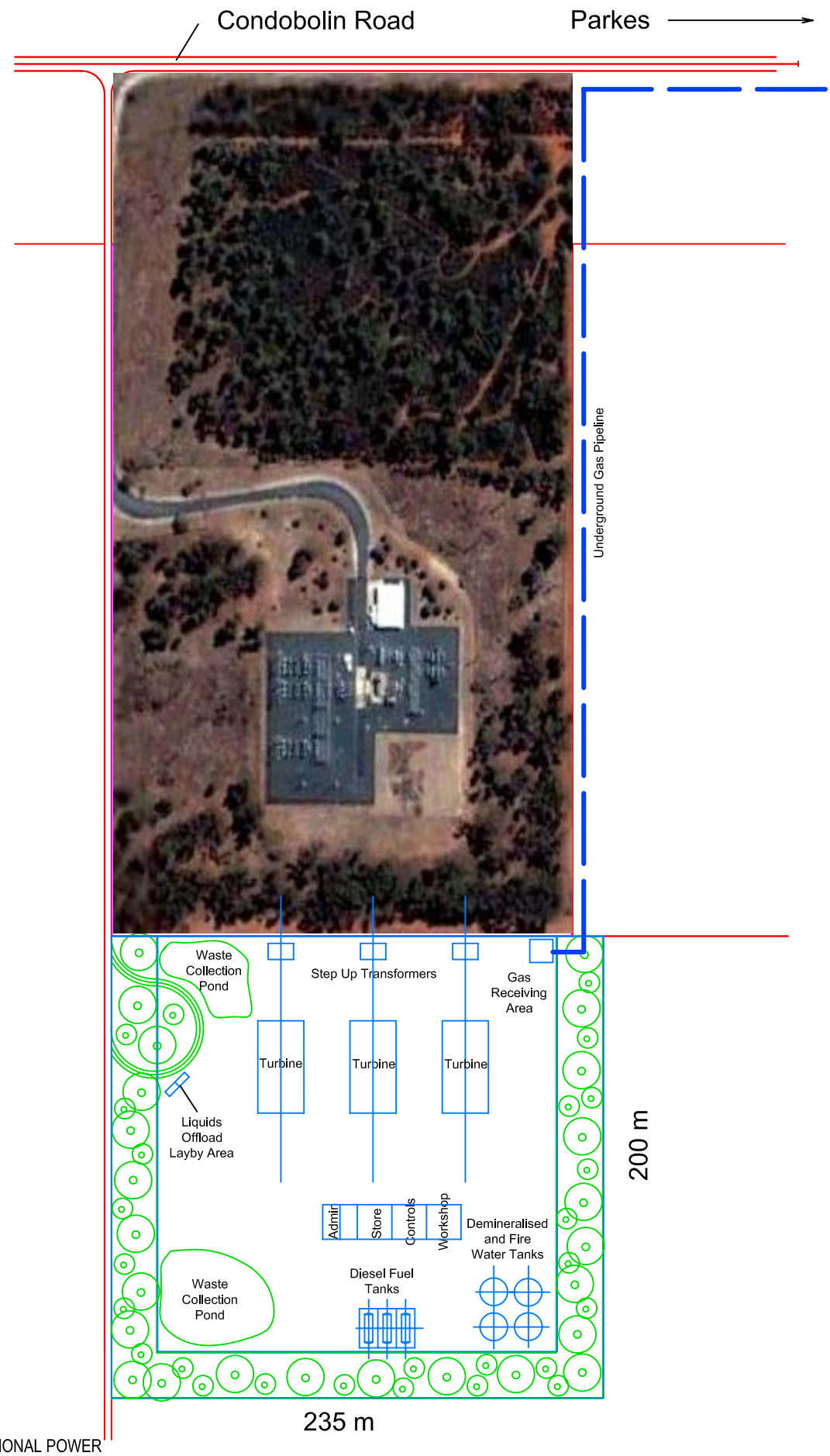
1.5 Location

The proposed site for the Parkes Peaking Power Plant is adjacent to Condobolin Road approximately 10 kilometres west of Parkes township (refer **Figure 1-1**). The site is currently privately owned and is immediately adjacent to an existing TransGrid-owned substation (refer **Figure 1-2**) and optimises connection flexibility to the 132kV substation bus. The proposed site is located on Lot 1 DP 602329. The Parkes Peaking Power Plant would occupy a site area of approximately 4.7 ha on a lot of 200 metres by 235 metres.

An agreement has been signed with the landowner for IPRA to purchase this land should the project proceed. Easement discussions have also been initiated with the Peaking Power Plant site landowner and other landowners through whose lands the gas pipeline route is likely to run - approximately one-third of the route has been secured at this time.

In practice, and subject to TransGrid's technical connection studies, at the substation it is equally feasible to connect at 132kV, 66kV or at both voltages should this prove more beneficial to TransGrid.

The selection of the site, some 10km from the Parkes township, is considered to be a major factor in mitigating the overall community and environmental (visual, noise and air emission) impacts on the local community. The closest residence to the proposed site is approximately 1km distant. Land procurement arrangements include sufficient space for extensive perimeter landscaping and screening of the facility. Alternative road access to the proposed site is also included in the land procurement arrangements should access via the existing TransGrid access road across Crown land prove problematic.



NOT TO SCALE

SOURCE: INTERNATIONAL POWER

Client: INTERNATIONAL POWER (AUSTRALIA) PTY LTD	Project: PRELIMINARY ENVIRONMENTAL ASSESSMENT - PARKES PEAKING POWER STATION	Title: INDICATIVE SITE LAYOUT
URS	Drawn: BH; Approved: NB; Date: OCT 06	Figure: 1-2
	Job No.: 43177456; File No.: 43177456.001.dwg	

IPRA proposes to construct and operate a peaking power station at Parkes with a nominal capacity of 120MW. Operating in open cycle mode, this would comprise three 40MW gas-fired generating units with dual fuel capability able to use distillate as backup fuel to ensure continuity of generation during gas supply interruptions. These units will be capable of operating individually or in conjunction, together providing a high level of reliable generation capacity embedded within the region.. This multi-unit concept would result in a reliability factor in excess of 99% on an annual basis.

The generating units would be of proven technology, comprising small compact generators enclosed in soundproof enclosures. They will be of the "fast start" type and able to provide "black start" capability on either gas or distillate for re-energising TransGrid's local regional network in the event of a major system collapse.

IPRA has commenced plant layout and sizing studies and has initiated negotiations for plant procurement.

The operating regime for the power station in the short to mid term peaking role is anticipated to be:

- Averaging 200 operating hours per year per unit;
- Averaging 1000MWh per year per unit;
- Gas consumption of up to approximately 40TJ per annum total;
- Backup distillate consumption (if required) of up to approximately 300 tonnes per annum total; and
- Water consumption of up to approximately 650kl per annum.

An indicative photograph of the type of plant is provided in **Plate 2-1**.

The facility would be operated as a zero wastewater discharge site.

In lieu of taking water from available potable supplies, IPRA is investigating the technical feasibility of installing water treatment facilities capable of treating effluent from the Parkes sewerage treatment works for process use in the plant. Initial investigations indicate that there is sufficient effluent available to meet all plant process requirements. Initial inquiries also indicate that the Council is receptive to the idea of treated water being used by the industry.

Source: International Power, 2006, Mintaro Power Station

Plate 2-1 – Indicative Power Station Appearance

This Project Application has been prepared in order to obtain environmental assessment requirements for the Peaking Power Plant project from the Department of Planning. The environmental assessment for the Peaking Power Plant will be prepared in accordance with the environmental assessment requirements, as required by Section 75F of the EP&A Act, in order to obtain approval from the Minister for Planning.

The general locality is subject to the legislative controls of Commonwealth, State and local planning and environmental frameworks. The following section discusses the site within the context of these legislative and planning provisions.

3.1 Commonwealth Legislation

Part 3 of the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 (Commonwealth) states 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 of the Commonwealth Minister for Environment and Heritage, as provided for under the provisions of Part 9 of the EPBC Act. The Act provides the following as matters of national environmental significance for which Ministerial approval is required:

- *World heritage properties;*
- *Wetlands of international significance (including Ramsar wetlands);*
- *Listed threatened species and communities;*
- *Listed migratory species protected under international agreements (CAMBA and JAMBA);*
- *Protection of the e*nvironment from nuclear actions; and
- *Marine environment.*

A search of the Commonwealth Department of the Environment and Heritage EPBC dataset indicates that whilst there are no World Heritage, National Heritage or Wetlands of International Significance within the immediate locality, the potential exists for the presence of a threatened ecological community and several threatened species and migratory species within two kilometres of the site.

The area surrounding the proposed facility is rural and agricultural land. It is anticipated that the environmental assessment of the Peaking Power Plant would indicate that the project would have minimal or no impact on the local area and, hence, would not be a controlled action under the EPBC Act. It is therefore anticipated that it would not require the approval of the Commonwealth Minister for Environment and Heritage. However, further studies would confirm this.

3.2 State Legislation

3.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (the Regulation) provide the framework for the assessment and approval of proposed developments in NSW.

The proposed development of the subject site for the purpose of a gas fired power station falls under the provisions of Part 3A of the Act. Part 3A of the EP&A Act provides processes for the assessment of development applications which are considered to be a "Major Project" as declared by a State Environmental Planning Policy (SEPP), or by order of the Minister in the Government Gazette.

The proposed works will have a capital investment of over $30million dollars and therefore the proposal is considered a Major Project by virtue of Clause 24(a) of Schedule 1 of SEPP 2005 Major Projects.

Part 3A Major Projects

Clause 24 (a) Electricity Generation provides that development for the purpose of an electricity generation facility that:

(a) has a capital investment value of more than $30 million for gas or coal-fired generation, or co-generation, or bioenergy, bio-fuels, waste gas, bio-digestion or waste to energy generation, or hydro or wave power generation, or solar power generation, or wind generation, or

As the project is for gas fired generation and the total estimated capital cost for the development, is $50 to $60 million, the proposal is considered to fall within the definition of a Major Project.

As a Major Project, the Peaking Power Plant is subject to the provisions of Part 3A of the EPA&A Act.

It is noted that the Minister cannot approve the development if it is prohibited under a Local Environmental Plan, Regional Environmental Plan or State Environmental Planning Policy (Section 75J(3)(b) of the EP&A Act). The site of the proposed development falls within the *Parkes Local Environmental Plan 1990* and is understood to be zoned as 1(a) Rural "A" Zone where energy generation activities are permissible with development consent from the relevant authority. Hence, the Parkes Peaking Power Plant would not be prohibited under the Plan and the Minister is not prevented from approving the development.

3.2.2 Other Relevant Environmental Acts, Regulations and Policies

Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) relates to pollution management and waste disposal in NSW. The POEO Act also establishes the environmental licensing of certain activities, which are listed in Schedule 1 of the Act. The proposed activities at the Peaking Power Plant which are scheduled (and, therefore, trigger the requirement for a licence) comprise:

- *Electricity generating works (including associated water storage, ash and waste management facilities) that:*

  (1) supply or are capable of supplying more than 30 megawatts of electrical power from energy sources (including coal, gas, bio-material or hydro-electric stations), but not including from solar powered generators.

Consequently, an Environment Protection Licence issued by the Environment Protection Authority (part of the Department of Environment and Conservation (DEC) will be required under the provisions of the POEO Act.

During the Part 3A process, this Project Application would be forwarded to the DEC for comment. IPRA would also consult with the DEC in order to ensure that the proposed development is designed and approved in accordance with DEC licensing requirements.

Other Acts

While the EP&A Act provides the framework for the planning and development approvals system within NSW, there are several other Acts and Regulations which must be considered. While the Integrated Development provisions do not apply to Part 3A Major Projects the provisions of these Acts still need consideration in the preparation of the Project Application and associated Environmental Assessment.

While the EP&A Act provides the framework for the planning and development approvals system within NSW, there may be a number of other Acts and Regulations of relevance to the Peaking Power Plant project. These Acts and Regulations would be identified and considered during the environmental assessment of the Peaking Power Plant project.

It is noted that Part 3A of the EP&A Act removes the need to obtain some approvals under these other Acts and Regulations.

3.2.3 State Environmental Planning Policies

There are several State Environmental Planning Policies (SEPPs) whose provisions may relate to the proposed Peaking Power Plant project other than the State Environmental Planning Policy (Major Projects) discussed above.

The project would be assessed within the context of applicable SEPPs as determined by the DOP.

3.2.4 Regional Environmental Plans

From the information available to date it is considered that there no any Regional Environmental Plans that have the potential to impact on this proposed project.

3.3 Local Legislation

As noted above, the site of the proposed development is falls within the *Parkes Local Environmental Plan 1990* and is understood to be zoned as 1(a) Rural "A" Zone where energy generation activities are permissible with development consent from the relevant authority.

This section provides a preliminary assessment of environmental impacts and matters for further consideration. The matters referred to in this section comprise *a preliminary assessment identifying the likely environmental issues*, in accordance with the Draft Guidelines *Steps in the Assessment and Approval of Major Projects under Part 3A* prepared by the Department of Planning.

All potential environmental impacts associated with the proposed Project will be mitigated and managed through the design process and in accordance with a Site Environmental Management Plan for both the construction and operational phases.

4.1 Land use and topography

The proposed site is immediately adjacent the existing substation and transmission line exit corridors. Current land use is agricultural cultivation. The proposed site is level.

4.2 Soils and Geology

The nature of the existing soils will be determined during the assessment including their suitability for the proposed structural loads, their erodibility, texture, rockiness, salinity and erosion potential. These qualities will be assessed to assist in developing the design of the proposed facility and control measures required during construction to mitigate adverse environmental impacts.

4.3 Noise Assessment

The proposed Parkes Peaking Power Plant includes the construction and operation of plant and equipment such as turbines, pumps and associated machinery. The generation equipment is located in acoustically lined chambers with external flues. The construction and operation of the plant and equipment, as well as infrequent vehicular traffic movement to and from the site when in operation, is likely to generate relatively low levels of noise.

It is anticipated that the Parkes peaking Power Plant would operate on an as-required intermittent basis for a total maximum period of up to 10 % of any year. Given the distance between the proposed location of the Peaking Power Plant and sensitive receiver locations, the nearest being a single residence approximately 1km south east of the proposed site, it is considered that there would be minimal impact on ambient noise level outside of the site. The potential noise impacts of the proposed development will be further investigated during the assessment process.

4.4 Air Quality and Greenhouse Gas Emissions

When operating, the Peaking Power Plant would generate air emissions, although the impacts on local and regional air quality would be mitigated through incorporating proven commercially available emissions control technology for the type and size of the gas turbines.

All power stations emit the products of combustion through an exhaust stack, however emissions from gas turbines are significantly lower than conventional coal fired stations. Typical thermal power station stack emissions include oxygen, nitrogen, carbon dioxide and nitrogen oxides and trace levels of carbon monoxide and sulphur dioxide. Particulates such as ash are not emitted from gas-fired stations. An assessment will be carried out as part of the Environmental Assessment to model the dispersion of emissions at the preferred site.

Gas turbine power stations have a lower greenhouse intensity than conventional coal or distillate fired power stations. An assessment of greenhouse emissions will be undertaken and include operation with the backup fuel (diesel) source. However, as the operation of the plant will be on an as-required intermittent basis for a total maximum period of up to 10 % of any year, the amount of emissions are expected to be minor in comparison with continuous base load generation alternatives. The Environmental Assessment will consider the potential greenhouse emissions generated by the project and compare these to average emission intensity for electricity generation in NSW.

4.5 Traffic and Transport

The proposed site is in close proximity to Condobolin Road. The operation of the Peaking Power Plant would require a very small number of transport movements directly off the Condobolin Road. It is unlikely that there would be any significant transport impacts during the operational phase of the Project.

There would be a temporary increase in traffic movements due to construction traffic during the construction stages of the project. These traffic movements are considered to be insignificant in terms of typical traffic movements on Condobolin Road in this location.

An assessment of the potential traffic generated by the construction and operation of the development will be carried out as part of the Environmental Assessment. Once the potential impacts from the development on the local road network are understood, appropriate mitigation measures will be suggested to address these impacts.

4.6 Visual Assessment

The Peaking Power Plant would be visible from neighbouring public and private land. However, it should be noted that this view is within the context of the existing adjoining TransGrid substation..

Whilst the design is yet to determine with any degree of detail the height and bulk of the buildings and structures, tree planting and other design measures, including colour schemes and choice of building materials, will reduce the visibility of the structures proposed.

The extent of this impact on the existing visual character and quality of the surrounding area together with potential mitigation measures will be addressed during the assessment process.

4.7 Risk and Hazard Analysis

The operation of the Parkes Peaking Power Plant may result in the potential for localised risks and hazards. IPRA intends to carry out hazard identification for the project and a process hazard analyses will be completed during the design stage. A quantitative risk assessment for the Peaking Power Plant will be conducted in accordance with Hazardous Industry Planning Advisory Paper No. 4 (Department of Urban Affairs and Planning 1993). Specific attention will be given to mitigation of risks on the health and safety of the workforce and local community.

These risks and hazards would be considered in the assessment of the Peaking Power Plant project in accordance with the provisions of *State Environmental Planning Policy 33 – Hazardous and Offensive Development*. It is anticipated the assessment will assist in identifying the scope and nature of control measures including emergency and fire response plans, fire and rescue training and natural disaster contingency plans.

Consideration will be given to the hazards and risks associated with the construction and operation of the gas turbine power station and gas connection from the existing Central West Pipeline at Parkes. A review of potential impacts on local bushfire risk will also be carried out.

A preliminary hazard analysis (PHA) will be undertaken as part of the Environmental Assessment, in accordance with the requirements of SEPP 33.

4.8 Water

During the construction and operation of phases of the development, surface water runoff from the site would have the potential to impact surrounding water bodies. An assessment of potential water quality and flooding issues will be carried out for the site. Consultation would be carried out with the Parkes Council and DNR to ensure that the proposed development complied with relevant guidelines and legislation. Mitigation measures will be recommended to address any potential impacts identified on surrounding water bodies.

The Peaking Power Plant will have relatively small process water requirements for power generation as the gas turbines will be operated in open cycle mode**.** Approximately 650kL of water per annum would be required. Water may also be required for inlet air cooling (to optimise hot weather operational efficiency) and control of air emissions (for environmental compliance).

In lieu of taking water from available potable supplies, IPRA is investigating the technical feasibility of installing water treatment facilities capable of treating effluent from the Parkes sewerage treatment works for process use in the plant. Initial investigations indicate that there is sufficient effluent available to meet all plant process requirements. Initial inquiries also indicate that the Council is receptive to the idea of treated water being used by the industry.

As part of the studies for the Environmental Assessment, IPRA will investigate both the technical feasibility of utilising recycled water as well as maximising the recycling of water on-site.

The facility would be operated as a zero wastewater discharge site. An assessment of water needs and the potential to meet those needs through rainwater/stormwater harvesting and groundwater sources will be examined in detail during the assessment including the potential impacts of groundwater abstraction on surrounding groundwater users. Management strategies will be identified to monitor and mitigate and potential impacts, including in relation to stormwater and wastewater retention, resulting from construction and operation of the proposed Project.

4.9 Waste

The Peaking Power Plant would not generate significant quantities of waste during operation. Small quantities of construction wastes would be recycled, wherever practicable, or disposed of at appropriate waste facilities.

4.10 Heritage

The Peaking Power Plant would be constructed and operated on land that has been previously cleared for agricultural purposes and used for crop cultivation. Whilst the likelihood for items of Aboriginal heritage significance to be present is considered to be low, a cultural heritage study will be undertaken for the proposed site and immediate surrounds. It is anticipated that there would not be any impacts on items of Aboriginal or non-Aboriginal heritage significance.

4.11 Flora and Fauna

The Peaking Power Plant would be constructed and operated within lands previously cleared for agriculture and currently used for grain crop cultivation. Preliminary database investigations to date have not identified any known or likely threatened animal or plant species on the proposed Project site, however 11 threatened species and six migratory species are known in the broader locality.

For example, there exists a threatened ecological community, the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the locality, however this does not exist on the proposed site.

The existence of isolated but significant tracts of native bushland in the broader locality, some managed as State Conservation Areas and Nature Reserves, have the potential to provide habitat for vulnerable or endangered species as well as many other native and exotic species. Subject to further investigation, the current state of the site as cultivated farmland is considered to provide little habitat value. It is anticipated therefore that there would not be any significant impacts on flora or fauna as a result of this proposal.

The extent of impact and potential mitigation measures will be quantified through further site investigation during the assessment process.

4.12 Social and Economic

The Peaking Power Plant would be likely to have positive impacts on the existing social and economic environment of the Parkes Shire and the local area. The construction phase would involve expenditure of a significant proportion of the estimated total project cost on local goods and services and generate associated employment. The operation of the plant would generate, albeit at a lower level, ongoing expenditure and employment opportunities for local communities.

The assessment will include a social impact analysis inclusive of the potential effect of the proposed Project on local and regional industries, employment, infrastructure and demography. An economic impact assessment will be undertaken to assist in assessing the economic viability of the Project in terms of its economic attributes and benefits to the surrounding communities and region with mitigation measures identified where necessary.

4.13 Stakeholder Consultation

IPRA will consult with all relevant stakeholders, including government agencies and the community as part of the environmental assessment process for the proposal.

IPRA proposes to construct a gas turbine Peaking Power Plant adjacent the existing TransGrid 132/66kV substation on a 4.7 hectare site approximately 10 km west of Parkes in central western NSW. The proposed plant will assist in meeting critical peak demand in the regional electricity grid and, as such, the operation of the proposed facility over the short to medium term would be intermittent.

The construction and operation of the Peaking Power Plant is considered to comprise a Major Project as defined by *State Environmental Planning Policy (Major Projects) 2005* and, therefore, would require approval from the Minister for Planning under Part 3A of the EP&A Act.

This document acts as a formal request for the Department of Planning to issue environmental assessment requirements for the proposal. The preliminary environmental assessment of the proposal outlined in this document indicates that, given the relatively remote location of the proposed facility, the key environmental issues associated with the proposal comprise potential impacts on air quality, visual amenity and risks and hazards. These issues would be assessed in detail as part of the environmental assessment of the proposal. Other environmental issues are not considered to be significant and will not require detailed assessment.

Upon receipt of the Environmental Assessment Requirements, IPRA will prepare an environmental assessment and submit the assessment as part of the Project Application for approval to construct and operate the proposed Peaking Power Plant.