

VOLUME 2 APPENDICES A - I FEBRUARY 2009

AGL Leafs Gully Power Project Environmental Assessment

MP 08_0077



URS



Switched on Business.

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Appendix A

Environmental Assessment Requirements

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NSW GOVERNMENT
Department of Planning

→ Steve Jackson

Contact: Scott Jeffries
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Mr Michael Fraser
Group General Manager
Merchant Energy
AGL Energy Limited
72 Christie Street
ST LEONARDS NSW 2065

Our ref: S07/01228
Your ref:

Dear Mr Fraser

Proposed Construction and Operation of Leaf's Gully Gas-Fired Power Station (300 MW), Appin Road, Gilead, Campbelltown Local Government Area

I refer to your submission of the project application and request for Director-General's requirements for the abovementioned proposal.

The Director-General's Environmental Assessment Requirements were issued to you on 4 April 2008, pursuant to section 75F(2) of the *Environmental Planning and Assessment Act 1979*. The Director-General's requirements were prepared based on the information provided up to that date. Subsequently, the Department has been notified (by letter dated 13 October 2008) that AGL is seeking to amend their Project Application to include works to upgrade and re-align the access road to the Leaf's Gully site.

Under section 75F(3) of the Act, the Director-General may alter or supplement the Environmental Assessment Requirements if necessary and in light of any additional information that may be provided prior to the Proponent seeking approval for the project. You are advised that the Department has reviewed the Environmental Assessment Requirements in light of the amended scope of the project and has updated the project description of the project in the attached Environmental Assessment Requirements accordingly.

The Department does not consider that the proposed re-alignment and upgrade of the access road warrants any additional key issues to be specifically assessed as part of the preparation of the Environmental Assessment. The Department, however, would expect that the proposed re-alignment and upgrade of the access road be described and assessed as part of the description and assessment of the project within the Environmental Assessment.

The Environmental Assessment should be prepared using valid and accepted technical and scientific tools and methodologies, focussing on key environmental impacts and robust mitigation measures to address potential impacts from the project. You should also ensure that you consult with the Department prior to submission of an Environmental Assessment to determine:

- fees applicable to the application;
- consultation and public exhibition arrangements that will apply; and
- number and format (hard-copy and/or CD-ROM) of the Environmental Assessments that will be required.

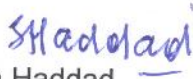
Once you have lodged the Environmental Assessment, the Department will consult with relevant authorities to determine the adequacy of the Environmental Assessment. Following this review period the Environmental Assessment will be made publicly available for a minimum period of 30 days.

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, it will require an additional approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval would be in addition to any approvals required under NSW legislation and it is your responsibility to contact the Commonwealth Department of the Environment, Water, Heritage and the Arts to determine if an approval under the EPBC Act is required for your proposal (02 6274 1111 or www.environment.gov.au).

Please note that the Commonwealth Government has accredited the NSW environmental assessment process for assessing impacts on matters of National Environmental Significance. As a result, if it is determined that an approval is required under the EPBC Act, please contact the Department immediately as supplementary Director-General's requirements will need to be issued.

You should keep the contact officer for this project, Scott Jeffries ((02) 9228 6426 or scott.jeffries@planning.nsw.gov.au), up to date with the progress of preparation of the Environmental Assessment, and seek clarification of any issues that may be unclear or may arise during this process.

Yours sincerely


Sam Haddad
Director-General

24/10/2008.

**LEAFS GULLY POWER STATION (300MW), APPIN ROAD, GILEAD, CAMPBELLTOWN
LOCAL GOVERNMENT AREA**

**ENVIRONMENTAL ASSESSMENT REQUIREMENTS UNDER PART 3A OF THE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979**

Project	Construction and operation of a 300 megawatt gas-fired peaking power station, 4.5 km north-west of the township of Appin in the locality of Gilead, Campbelltown local government area. The project includes: • plant comprising two gas turbines, generators and ancillary plant; • high voltage switchyard with transformers and circuit breakers; • security fencing and gatehouse; • control room, administration, amenities, car parking and workshop facility; • fire protection tank, potable water tank and septic tank; • sedimentation pond and associated earth bund and diversion drain; • air compressor plant; • switchroom; • emergency generator and transformers; • landscaping to provide visual screening of the facility; • evaporation pond to accommodate wastewater discharges from the evaporative air inlet cooler; • construction of internal roads; and • upgrading and re-alignment of the access road to the site from Appin Road.
Site	Lot 101 DP 716209, Lot 102 DP 716209, Lot 103 DP 716209, Lot 104 DP 716209, Lot 105 DP 716209. The access road would be located in an existing Right of Carriageway on Lot 1 DP 70208.
Proponent	AGL Energy Limited
Date of Issue	15 October 2008
Date of Expiration	15 October 2010
General Requirements	The Environmental Assessment must be prepared to a high technical and scientific standard and must include: • an executive summary. • a description of the proposal, including construction, operation, and staging. • an assessment of the environmental impacts of the project, with particular focus on the key assessment requirements specified below. • justification for undertaking the project with consideration of the benefits and impacts of the proposal. • a draft Statement of Commitments detailing measures for environmental mitigation, management and monitoring for the project. • certification by the author of the Environment Assessment that the information contained in the Assessment is neither false nor misleading.
Key Assessment Requirements	The Environmental Assessment (EA) must include assessment of the following key issues: • Strategic Planning – the Environmental Assessment must provide: → a strategic assessment for the project, including justification of the need, scale, scope and location of the project in relation to predicted electricity demand, predicted transmission constraints, and the strategic direction of the region and the State regarding the State electricity supply and demand and electricity generation technologies; → a strategic planning consideration of the project and an analysis of the suitability of the proposed site with respect to potential land use conflicts with existing and future surrounding land users (including reference to the Macarthur South Position Paper being developed by the Department); → an assessment of the potential impacts of the project to influence changes to future land use character in proximity of the site; → details of how the proponent will establish and maintain a vegetated buffer around the proposed development site to provide a transitional land use between the development and potential future residential development. The Environmental Assessment shall include specific details of funding for

establishment and maintenance of the buffer in perpetuity, including identification of an appropriate land manager;

- **Greenhouse Gases** – the Environmental Assessment must include a comprehensive greenhouse gas assessment on predicted greenhouse gas emissions (tCO_{2e}) including emissions on:
 - a tonnes per unit of production (MWh) basis;
 - a total annual emissions basis; and
 - a project lifetime basis; a fuel basis (natural gas and distillate).
 The assessment must include direct emissions, indirect emissions and any significant upstream/downstream emissions. The emissions must be estimated using appropriate methodology as per the Australian Greenhouse Office's *Factors and Methods Workbook* (2006). Annual emissions must be compared against: 'best practice' emission for peak electricity generation; total annual NSW emissions; emissions from a coal fired facility producing the equivalent amount of electricity. An evaluation of the feasibility of additional measures to reduce greenhouse gas emissions, including offsets must be included in the Environmental Assessment.
- **Air Quality Impacts** – The Environmental Assessment must include a comprehensive air quality impact assessment developed in consultation with the Department of Environment and Climate Change (DECC) and prepared in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2005), with particular reference to:
 - cumulative air emissions and existing background air quality levels at a local, regional and interregional level;
 - emissions of pollutants that contribute to photochemical smog formation;
 - air quality impacts from operation of the project and mode of operation, including start-up, shut-down, full and partial load operations, and if relevant, black start capacity;
 - a specific analysis of the project in the context of current NO_x guideline exceedances in the region, including a clear demonstration that the project has been designed to include the application of Best Available Control Technology (BACT) for NO_x. The Environmental Assessment must outline what other mitigation measures will be applied to achieve this outcome, including any proposal by the Proponent to offset emissions through reductions elsewhere in the region;
 - an analysis of the project's potential to limit or preclude transport-related or employment-generating emissive industry in the Sydney airshed by virtue of the project directly or indirectly consuming available airshed capacity (with respect to NO_x, O₃, VOCs or particulates). This analysis must include consideration of any strategic benefits of locating additional generating capacity in the Sydney airshed;
 - a description of measures proposed to manage and monitor the efficiency and performance of air pollution control techniques which have been developed in consultation with the DECC;
- **Noise Impacts** – the Environmental Assessment must include a noise impact assessment for the project, conducted in accordance with *NSW Industrial Noise Policy* (EPA, 2000). The assessment must include consideration of noise impacts during each stage of the development and each phase of operation, with a particular focus on scenarios under which meteorological conditions characteristic of the locality may exacerbate impacts. The Environmental Assessment must also include an assessment of the construction noise impacts of the project, against the criteria provided in Chapter 171 of the *Environmental Noise Control Manual* (EPA, 2004). The Environmental Assessment must clearly outline the noise mitigation, monitoring and management measures the Proponent intends to apply to the project.
- **Water Quantity and Quality Impacts** - The Environmental Assessment must include an assessment of the water quantity and quality impacts of the proposal, with particular reference to the water needs of the project, the proposed source of water, and the implementation of water saving measures (including use of treated effluent or rainwater). The Environmental Assessment must also identify the quantity and quality of wastewater, how this wastewater would be disposed of, and how stormwater would be managed at the site. The Environmental Assessment must reflect a design philosophy of zero water discharge from the site, except for natural surface water flows.

	The Environmental Assessment must detail the outcomes of consultation with the Sydney Catchment Authority regarding the adequacy of the separation distances and water pollution controls to ensure the protection of the adjacent Sydney Water supply canal. • Flora and Fauna Impacts – the Environmental Assessment must include an assessment of impacts of the project on flora and fauna, prepared in accordance with <i>Guidelines for Threatened Species Assessment</i> (DEC/ DPI, July 2005). The Environmental Assessment must specifically consider threatened species and communities listed under both State and Commonwealth legislation that have been recorded on the site and surrounding land, in the area, including <i>Pultenaea pedunculata</i>, the Eastern Bent-wing Bat, the Grey-headed Flying Fox and the Shale/Sandstone Transition Forest Endangered Ecological Community. The Environmental Assessment must also detail measures to avoid or mitigate impacts on threatened species associated with the siting and construction of any access roads and other infrastructure. This must include the identification of any potentially impacted paddock and fence trees with an assessment of the functioning of this vegetation in terms of habitat and movement of arboreal threatened fauna in the local area. • Hazards and Risk Impacts – the Environmental Assessment must include a screening of potential hazards on site (including new gas supply infrastructure) to determine the potential for off site impacts and any requirement for a Preliminary Hazard Analysis (PHA). The PHA, should potential off-site impacts be identified, must be prepared in accordance with the Department's <i>Hazardous Industry Planning Advisory Paper No. 3, Hazardous Industry Planning Advisory Paper No. 6</i> and <i>Multi-level Risk Assessment</i>. Risk impacts associated with the transport of dangerous goods and hazardous materials must be documented with reference to the Department's draft <i>Route Selection</i> guideline. The Environmental Assessment must also detail the outcomes of the consultation with the Mine Subsidence Board with respect to subsidence impacts and risks from mining under and in the vicinity of the project site, and how these impacts and risks will be managed. • Heritage Impacts – the Environmental Assessment must include an assessment of impacts on Aboriginal heritage, in accordance with draft <i>Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation</i> (DEC, 2005). The Environmental Assessment must also include an assessment of the potential for the project to impact on known items of non-Aboriginal heritage significance, and include a management framework for management of any additional heritage items that may be uncovered during construction of the project. • General Environmental Risk Analysis – notwithstanding the above key assessment requirements, the EA must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EA.
Consultation Requirements	You must undertake an appropriate and justified level of consultation with the following parties during the preparation of the EA: • NSW Department of Environment and Climate Change; • Sydney Catchment Authority; • Mine Subsidence Board; • Campbelltown City Council; • Wollondilly Shire Council; • each landowner and land occupier within two kilometres of the boundary of the proposed development site; and • the local community. The Environmental Assessment must clearly indicate issues raised by stakeholders during consultation, and how those matters have been addressed in the Environmental Assessment.