



PEL 127

ANNUAL REPORT

YEAR 3

15 June 2007 to 14 June 2008

**Hybrid Energy Australia Pty Ltd
Adelaide, South Australia
August, 2008**

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4. REGULATED ACTIVITIES

Section 33(2) (a) a summary of the regulated activities conducted under the licence during the year.

4.1. Drilling Operations

No drilling operations were conducted during the third year of the licence term.

4.2. Geophysical Operations

No geophysical operations were conducted during the third year of the licence term.

4.3. Geotechnical and Other Studies

Over the last year further studies and reports have been commissioned to assist in the development of the FuturGas Project including:

Report Title / Purpose	Author	Date
The Production of Synthetic Natural Gas, Ammonia and Power From Kingston Lignite. Study describing conversion of Kingston Lignite into downstream products as well as electricity.	Duncan Seddon & Associates P/L	July 2007
Hybrid Energy SA P/L FuturGas Project Scoping Study. Scoping study covering Mining, Process Options, Research & Engineering, Product Analysis, Carbon Capture & Storage, Environmental Impact & Water Management, Legislation & Permitting, Infrastructure, Utilities & Human Resources, Risk & economic Analysis.	TD Chemicals P/L	November 2007
FuturGas Project – Potential Groundwater Management Costs. Estimate of costs for pumping and reinjection of groundwater from a 2.4Mtpa mining operation.	URS	December 2007
Estimate of Connection Charges – Kingston FuturGas Power Station. Indicative estimate of connection charges from Black Range substation site to a power generation facility in vicinity of Kingston lignite deposit.	Power Network Strategies	November 2007
FuturGas Technology Survey. Survey of current and potential future technologies in transforming lignite into electricity and synthetic fuels.	Shedden Uhde (Australia) P/L	February 2008
FuturGas Project 350MW Power Plant Cost Estimates. Study examining likely capital and operating costs associated with a 350MW power station burning lignite.	Worley Parsons	February 2008
Independent Electricity Market Report. A review of the current outlook for the electricity market and opportunities relating to sale of electricity into a regional electricity market.	Energy Advice	March 2008
Groundwater Pumping/Reinjection Literature Search. Global search for examples of groundwater pumping and aquifer reinjection related to open cut mining.	URS	February 2008
Hybrid Energy Report. Outlook for Future Oil, Naptha, Diesel Pricing and Demand.	Energy Quest	April 2008
Adelaide Research Innovation – FuturGas Research Project. 3 x Monthly Progress Reports. Monthly reports summarising progress on the lignite gasification experimental program commenced in April 2008	PJ van Eyk & PJ Ashman	April, May, June 2008
Interim Report – Conceptual Groundwater Model For The FuturGas Project, Kingston SE. Outline of conceptual model of the groundwater system relevant to potential lignite mine that will form basis for subsequent development of numerical groundwater models & simulations.	URS	June 2008

A highlight of the year was an agreement signed with Adelaide Research Innovation (commercial arm of Adelaide University) to commence a 3 year lignite combustion / gasification testing and process development program. Testing and experimentation commenced in April 2008.

Work has also commenced on developing strategies (suitable to all stakeholders) to resolve the groundwater issues surrounding any proposed extraction of the Kingston lignite. The first step has been taken with URS engaged to build a groundwater model for the lignite deposit and surrounds and carry out simulations of water drawdown based on a 30 year mine life. Final results are expected in mid-late 2008

The other studies have suggested the suitability of the lignite for gasification into liquid fuels, the use of circulating fluid bed combustion gasifiers to produce synthetic gas to further synthesise into a wide range of chemicals and liquid fuels; and the provision of carbon capture and storage infrastructure to sequester carbon dioxide in local sites.

With this body of scoping work now completed, Hybrid Energy is planning to conduct a Pre-Feasibility Study in order to prepare for the Feasibility Study (see section 5.7).

5. COMPLIANCE ISSUES

5.1. Regulatory Compliance

Section 33(2) (b) a report for the year on compliance with the Act, these regulations, the licence and any relevant statements of environmental objectives.

No environmental incidents were reported for the permit year.

5.2. Rectification of Non-Compliance

Section 33(2) (c) a statement concerning any action to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, and to minimize the likelihood of the recurrence of any such non-compliance.

Hybrid Energy Australia is not aware of any instances of non-compliance during the permit year.

5.3. Management System Audits

Section 33(2) (d) a summary of any management system audits undertaken during the relevant licence year, including information on any failure or deficiency identified by the audit and any corrective action that has, or will be, taken.

No management system audits were undertaken during the current permit year.

5.4. Data Submissions

Section 33(2) (e) a list of reports and data relevant to the operation of the Act generated by the licensee during the relevant licence year.

Annual Report for PEL-127 Permit Year 2 submitted in August 2007.

5.5. Safety

Section 33(2) (f) in relation to any incidents reported to the Minister under the Act and these regulations during the relevant licensing year-

Section 33(2) (f) (i) an overall assessment and analysis of the incidents, including the identification and analysis of trends that have emerged.

Section 33(2) (f) (ii) an overall assessment of the effectiveness of any action taken to rectify non-compliance with obligations imposed by the Act, these regulations or the licence, or to minimize the risk of recurrence of any such non-compliance.

No reportable incidents occurred during the reporting period.

5.6. Threat Prevention

Section 33(2) (g) a report on any reasonably foreseeable threats (other than threats previously reported on) that reasonably present, or may present, a hazard to facilities or activities under the licence, and a report on any corrective action that has, or will be taken.

There were no perceived threats, and no action taken.

5.7. Licence Conditions and Future Work Program

Section 33(2) (h) unless the relevant licence year is the last year in which the licence is to remain in force a statement outlining operations proposed for the ensuing year.

The planned program for Year 4 is undertaken in conjunction with the technical and commercial work on the coincident Mineral Licences.

This work will comprise:

- 1) A Pre-Feasibility Study that will encompass:
 - Selection of the optimum mining method;
 - Development of an effective groundwater management plan
 - Indicative plant economics for the coal-to-liquids plant;
 - Coal-to-liquids downstream product study to identify the expected commercial advantages and disadvantages of each of the various potential products; and
 - The confirmation of geosequestration technologies and sites.

The current proposal for the FuturGas Project is to apply proven clean coal and low-emissions technology to construct a gasification facility with integrated electricity generation, incorporating infrastructure for carbon dioxide capture and storage.

Completion of the Pre-Feasibility Study is expected in first quarter of 2009.

- 2) Large diameter core drilling to supply 50 – 80t of Kingston lignite for the ongoing combustion / gasification trials. This program is expected to commence toward the latter part of this 4th year term.

6. EXPENDITURE STATEMENT

Section 33(3) an annual report must be accompanied by a statement of expenditure on regulated activities conducted under the licence for the relevant licence year.

Commercial in Confidence