



ACN 109 200 900

**ASX QUARTERLY REPORT
FOR PERIOD ENDED 31ST DECEMBER 2006**

HIGHLIGHTS

Hythane®

- Ten-year agreement with Ashok Leyland, one of India's largest bus manufacturers, to develop Hythane® bus engines.
- First two Ashok Leyland gas engines despatched to US for Hythane® conversion.
- Four major Hythane® bus demonstration projects planned in India for the first half of 2007.
- Indian Government plans substantial step up in Natural Gas supplies for vehicles over the next five years.
- First US Department of Energy contract to test hydrogen and Hythane® engines awarded to Hythane Co.
- Negotiations for several US Hythane® demonstration projects finalised and awaiting government funding.

Wales – Coal Bed Methane and Abandoned Mine Methane

- All permitting for CBM and AMM sites received; first drill pads for CBM and AMM cleared.
- Drilling scheduled for late in first Quarter of 2007.

Geothermal

- Renmark Project secures \$100,000 PACE grant from SA government.

New Technologies

- Two new patents were developed during the Quarter over strategic technologies related to Hythane Co's core business of production and use of Hythane® and hydrogen.

Corporate

- The Company has decided to change the name of its wholly owned subsidiaries, Brehon Energy plc (based in Ireland) and Brehon Cryogenics LLC (based in USA), to Eden Innovations Ltd and Eden Cryogenics LLC respectively to reinforce the broad, global, alternate energy focus of the Company.

Eden Energy Ltd (“Eden”) directly and through its wholly owned subsidiaries, Brehon Energy plc (“Brehon”) and Hythane Company LLC (“Hythane Co”), holds 100% of the interests in these following world-class alternate energy projects.

Hydrogen and Hythane® (Eden 100%)

Hythane® Marketing

During the quarter ended 31st December 2006 (“the Quarter”) further progress was made in the marketing of Hythane®, with significant advances achieved in the USA and India in particular.

1. India

Background

As a result of a Supreme Court ruling in 2001, the entire public transport fleet in Delhi operates on Natural Gas. This comprises approximately 15,000 buses, 40,000 taxis and 100,000 auto rickshaws. Similarly, in Mumbai many of the 100,000 auto rickshaws are now operating on Natural Gas and it is planned to convert the very large bus and taxi fleets (estimated at approximately 20,000 buses and 60,000 taxis) to operate on Natural Gas. Similarly, in Gujarat and Kanpur, where Natural Gas is also currently available, significant numbers of Natural Gas buses also currently operate and expansion of these fleets is planned. In all of these cities, photochemical smog is already a serious issue, and becoming worse as the number of motor vehicles rises. NO_x is the major constituent of photochemical smog and more than 70% is estimated to come from motor vehicles. NO_x is halved when Hythane® is used in lieu of Natural Gas, and this provides a great opportunity for Eden to develop a very large market for its Hythane® related technology in these cities.

At present, India has only a very limited Natural Gas distribution network. Over the next five years the Indian Government plans to extend the gas pipeline network to cover more than 50% of the population (of 1.1 billion people) and more than 60% of its entire vehicle market. The Indian Government also plans to expand the Natural Gas supply from approximately 5 million tonnes per annum to 25 million tonnes per annum over the same period.

This opens up a huge market for Natural Gas and Hythane® as an ultra-low emission vehicle fuel for a potential market of more than 500,000 buses and many millions of trucks, minibuses, taxis, cars and auto rickshaws.

Additionally, many tens of thousands of large businesses and buildings in India have their own diesel-powered generators, due to the unreliable electricity supply. As Natural Gas is, approximately, only 50% of the cost of diesel, it is anticipated that as Natural Gas becomes more widely available, many of these generators will be converted to operate on a dual fuel mixture of diesel and Natural Gas. By using Hythane® in place of Natural Gas, the percentage of diesel in this dual fuel mix may be reduced to only 10-15% compared with approximately 40% if Natural Gas alone is used. This use of Hythane® has similar potential in the large diesel electric locomotive market in India and in Natural Gas powered electricity generators.

The dual fuel application will also open up a potentially lucrative carbon credit potential, pursuant to the Clean Development Mechanism (CDM) under the Kyoto protocol, which is available to India as a developing nation.

Eden, through a proposed Indian joint venture, utilising its various patents and extensive expertise, aims to supply Hythane® engine conversions, and supply and service hydrogen production equipment, and Hythane® blending equipment, for all these markets.

The total potential market for Hythane® in India is extremely large and Eden is well placed to capture a significant share of this exciting and potentially very rewarding market.

Indian Hythane® Engines and Demonstration Projects

During the Quarter, the first Indian Natural Gas engines to be converted for Hythane® operation were despatched from India to the Hythane Company's facility in Colorado.

The Ashok Leyland engines, which are leading Natural Gas bus engines, will be converted to Hythane® operation during the first Quarter of 2007 and then returned to India for use in demonstration projects.

Four major Hythane® bus demonstration projects are planned in Delhi, Mumbai, Ahmedabad and Kanpur - major cities where Natural Gas is presently available. Significant interest in participating in these demonstration projects has been expressed by many of the major players within the Indian market sector, including oil and gas companies, gas distribution outlets, transport authorities, testing and regulatory authorities and government agencies. Eden is confident that completion of these demonstration projects will lead to a progressive rollout of Hythane buses in India, as Natural Gas becomes more wide available over the next five years.

Ten Year Agreement with Ashok Leyland

Brehon Energy plc (to be re-named "Eden Innovations Ltd"), a wholly owned subsidiary of Eden Energy Ltd, entered into an Agreement with Ashok Leyland, the flagship company of the transnational Hinduja Group, and leading manufacturer of buses in India, to develop Hythane® versions of its Natural Gas bus engines to enable these engines to achieve very low emission levels comparable with the best engines currently available in the world.

In 1997, Ashok Leyland pioneered CNG buses in the Indian metropolitan cities of Mumbai and Delhi and spearheaded the large-scale induction of this eco-friendly technology in the bus fleet of Delhi. Ashok Leyland currently manufactures 11,000 to 14,000 buses per year, and has a lion's share in all metropolitan state transport bus fleets in India. Its buses carry over 60 million passengers per day. With annual production capacity of 80,000 vehicles, it is also a major manufacturer of trucks and defence vehicles.

Under the terms of the Agreement, which will operate until the end of 2016, Brehon will carry out the Hythane® calibrations at its test facilities in Colorado, USA, and receive a royalty for providing the calibration to Ashok Leyland.

This Agreement provides Brehon with a tremendous base for its Indian operations, upon which it intends to expand into the generator market, truck market, locomotive market, cars (including taxi fleets) and three-wheeler (auto rickshaw) markets.

Indian Government expansion plans

The Indian Government recently announced that during the next five years it plans to facilitate the expansion of the Natural Gas pipeline network to make Natural Gas available to 50% of the Indian population and up to 60% of vehicles in metropolitan cities and towns in India. A huge increase in Natural Gas supplies, from 5 million tonnes per annum to 25 million tonnes per annum, is also planned to cater for the enhanced requirement.

It is anticipated that the number of Natural Gas buses will increase dramatically during the next five years, and Brehon aims to have a large percentage of these buses operating on Hythane®. At present, Natural Gas sells at about 60% of the cost of diesel and this provides a great incentive for bus fleet operators to use Natural Gas as a vehicle fuel wherever it is available.

Eden's Indian Strategy

Eden aims to establish a joint venture company in India with a major Indian partner. The joint venture will derive revenue from various sources including royalties on Hythane® engine calibrations, from the sale of equipment for the production and blending of Hythane®, and the ongoing maintenance of such equipment. Ongoing negotiations for this proposed joint venture are at an advanced stage.

Additionally, marketing of any consequential carbon credit benefits that may be derived from the conversion of engines to Hythane® operation could potentially leading to a significant revenue stream for the Indian joint venture should the Hythane® marketing programme be successful.

2. USA

Hythane Company was awarded the “Most Promising” award at the 7th Annual Energy Venture Fair on November 9, 2006 in Santa Clara, California.

The Energy Venture Fair selects the five most impressive companies for this award out of those participating in the event. Each year, the Fair targets environmental technology companies in North America and hand-picks 75 companies to present business plans and products to an audience of key potential investors. The Fair has a reputation of being the best event for investors wishing to find new companies with potential in this market sector.

US Hythane® Demonstration Projects

Hythane Company LLC (“Hythane Co”), Eden Energy’s wholly owned US subsidiary, has received confirmation that it has satisfied the US Department of Energy’s audit requirements and been formally awarded the US\$2 million contract that was previously referred to in our ASX announcement of 26th September 2006.

The contract, which will operate over a 2-3 year period, is for a test programme involving two identical, heavy-duty, spark-ignited natural gas engines will be acquired and modified – one to run on Hythane® and the other to run on hydrogen. Hythane Co. will undertake most of the work on the 2500-hour test programme.

Additionally, negotiations for several Hythane® demonstration projects for cities in California and in the northeastern USA were completed and these projects are awaiting funding.

3. Europe

European interest is emerging, particularly in Italy, for Hythane® demonstration projects. Negotiations with various interested parties are being progressed and it is hoped these talks will result in Hythane Co’s participation in one or more demonstration projects in Europe during 2007.

4. China

China remains a major target market for Hythane® and Eden plans to re-enter the Chinese market later in 2007, after the marketing structure in India is resolved and the equipment development and manufacture is progressed.

Cryogenics

Brehon Cryogenics LLC, which has changed its name to Eden Cryogenics LLC, has relocated to new premises in Ohio. It is projected that its sales will significantly increase during 2007, expanding on its initial sales of cryogenic pipes, valves and fittings to NASA and a major soft drink manufacturer. This is targeted to become a major positive cashflow source for the Eden group.

Eden Cryogenics LLC will develop a broad range of cryogenic products, services and skills that will complement the company's new cryogenic storage technologies and patents, particularly for the emerging Liquefied Natural Gas (LNG) and Liquefied Hydrogen markets in the USA and elsewhere.

New Patents and Technology

Hythane® and Hydrogen Usage in Internal Combustion Engines

During the Quarter, a new patent for use of hydrogen in engine applications was lodged by Hythane Co. Stoichiometric engines, which use a chemically balanced mixture of air and fuel to ensure complete combustion of the fuel, are anticipated to become more common in the future since when used in conjunction with new three-way catalyst exhaust systems they produce very low levels of non-carbon emissions.

The Company's earlier Hythane System patent (filed in January 2006) covers the use of Hythane® in the latest natural gas engines running stoichiometric air/ fuel ratios with exhaust gas recirculation (EGR). These new engines combine some of the best characteristics of traditional stoichiometric and lean burn engines: high efficiency, low combustion temperatures and thermal loads, and near-zero emissions with the use of an exhaust catalyst. When fuelled with Hythane®, these engines will see an efficiency improvement of 10-15%, even lower thermal loads for longer engine life, and better emissions during rapid changes in engine speed or load.

The new patent (filed October 2006) optimises the use of pure hydrogen fuel in internal combustion engines. The methods described in the patent will produce near-zero emissions and increase efficiency whilst at the same time avoid the fast, unstable combustion and NO_x emissions usually seen with pure hydrogen fuelled internal combustion engines. This results in modelled peak efficiency improvements in the range of 30% to 50%, when compared to previous lean burn hydrogen engines. At part-load conditions, the efficiency improvements can be even greater, with operation comparable to the best diesel engines and competitive with today's experimental fuel cell systems.

These advanced engine control technologies provide a low-cost method to immediately use hydrogen in a wide range of vehicles, whilst the various on-going research programmes into fuel cells continue in an effort to overcome the various technical and commercial difficulties that currently still confront fuel cells.

Hydrogen Production using Low Temperature Pyrolysis (Eden 50% interest)

Significant progress was made in the research and development project that Eden has with the University of Queensland (50% Eden). The project is to develop a low-temperature, low-cost, method of producing hydrogen and carbon black from Natural Gas, instead of producing hydrogen and carbon dioxide.

Carbon black is an amorphous solid form of carbon that is used in inks, photocopy toner, as a pigment and reinforcement in rubber and plastic products (especially vehicle tyres) and in radar-absorbent materials.

Since the end of the Quarter, a patent in the joint names of the Company and the University of Queensland was lodged for this new process.

The patented process, which still requires development for commercial use, has immediate application in low-cost Hythane® production, and, great potential as a future source of pure hydrogen (without any CO₂ production), as the anticipated hydrogen economy market develops over the next five to ten years.

South Wales – Coalbed Methane/Coalmine Methane/Natural Gas (Eden earning 50%)

During the Quarter, work continued with finalising permits for drilling a series of coal bed methane and coal mine methane drill holes during the first half of 2007 and securing contractors for different phases of the programmes.

Coal Bed Methane

All permits have been obtained for the first Eden-funded CBM drilling programme in Petroleum Exploration and Development Licence 100.

Site works and pad clearing have been completed on the first drill site.

Abandoned Mine Methane

All permitting and agreements for the first three AMM sites have been received, with the exception of an agreement with the local power distribution company for sale of electricity.

Site works and pad clearing have been completed on the first drill site.

Conventional Petroleum/Natural Gas

Tenders for 2D seismic data acquisition were received and are under evaluation. Final seismic acquisition programmes will be designed to complement the acquisition technology selected for the programme.

Geothermal Exploration (Eden 100%)

Eden holds eight geothermal exploration licences in South Australia: GELs 166, 167, 168, 169, 175, 176, 177 and 185.

Eden Energy is pleased to announce that the SA Government has endorsed its Renmark Geothermal Project concept by approving the funding, up to a level of \$100,000, of a new drill hole to assess the geothermal potential of the Renmark-Tararra Trough.

Eden holds Geothermal Exploration Licences 175 and 176, which are located in the Renmark area of South Australia. Access to major powerlines for distribution is over much shorter distances than other projects in more remote locations.

The Renmark-Tararra Trough is a 300km long sedimentary basin running in a north-easterly direction, located just to the north of Renmark. There are significant accumulations of sediments, including good insulating coaly material, in the Renmark Trough that Eden concludes may provide effective thermal insulation, which, associated with major faults on the basin margins, to provide enhanced permeability, combine to make the Renmark area an attractive geothermal target.

The Renmark area stands out as a significant temperature anomaly on the ANU Austherm 2004 image of estimated temperature at 5 km depth. A majority of the weighting for the anomaly is due to data from the Nulla Nulla 1 well located just over the NSW border.

Eden are proposing to drill a new hole to acquire drill core and temperature measurements from within the Renmark Trough to confirm the anomalous heat flow status of the Renmark area as suggested by the Austherm image. The temperature data will enable an estimate of the temperature at depth in the area. Core from the hole will enable thermal conductivities to be directly measured and a robust

estimation of heat flow and temperature gradient in the area. The programme will also dovetail with data that will be available from a new Department of Water, Land and Biodiversity Conservation (DWLBC) saline water re-injection test well near Lock 6 on the Murray River, providing a more regional view of the heat flow.

A successful hole and heat flow estimate will establish the presence of a well-located, significant, new, geothermal resource at attractive depths for utilisation in South Australia, which is in a location quite close to prospective markets and infrastructure. Success would also confirm a major new style of geothermal target in SA and accelerate exploration of this particular resource as well as highlighting the prospectivity of naturally permeable zones in sedimentary basins with high heat flows.

South Australian Gas Project (Eden 100%)

Negotiations with relevant Native Title parties commenced. An agreement is expected in early 2007. Following agreement on the Native Title, grant of the Petroleum Exploration licence is expected shortly thereafter.

It is hoped to drill the already identified Natural Gas target later in 2007, possibly in conjunction with a joint venture partner.

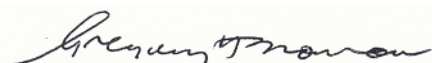
Corporate

It was agreed to change the names of Brehon Energy plc and Brehon Cryogenics LLC to Eden Innovations Ltd and Eden Cryogenics LLC respectively, to reflect the association of these wholly-owned subsidiary companies with Eden Energy Ltd, and to highlight the extent and diversity of the globally significant alternate energy asset portfolio of Eden Energy Ltd.

Subsequent to the Quarter, Eden issued 11,556,429 fully paid ordinary shares at an issue price of AUD \$0.35 per share raising a total of \$4,042,750.20. These shares were issued to UK and Australian institutions and investors in accordance with sections 708(1) and 708(8) of the Corporations Act 2001 (“the Act”) and under the 15% placement rule of the Australian Stock Exchange Listing Rules.

The funds will be used for the following purposes:

- to expand and accelerate the marketing of Hythane® in India and other markets;
- to fund an expanded drilling programme for coal bed methane and Natural Gas in Wales;
- to provide additional capital in relation to the exploration on the Company’s geothermal and Natural Gas targets in Australia; and,
- to provide further funds to meet the Company’s ongoing working capital requirements.



Greg Solomon
Executive Chairman

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

EDEN ENERGY LIMITED

ABN

58 109 200 900

Quarter ended ("current quarter")

31 DECEMBER 2006

Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (3 months) \$A'000
1.1	Receipts from product sales and related debtors	29	29
1.2	Payments for (a) exploration and evaluation (b) development (c) production (d) administration	(3)	(10)
1.3	Dividends received	(1,098)	(2,056)
1.4	Interest and other items of a similar nature received	0	0
1.5	Interest and other costs of finance paid	52	113
1.6	Income taxes paid – GST Paid	(2)	(4)
1.6	Income Taxes – GST Refunds Received	(10)	(30)
1.7	Other (provide details if material)- Research & Development –Hydrogen production	18	85
		(32)	(79)
	Net Operating Cash Flows	(1,046)	(1,952)
Cash flows related to investing activities			
1.8	Payment for purchases of: (a)prospects (b)equity investments (c)other fixed assets	0	0
1.9	Proceeds from sale of: (a) prospects (b)equity investments (c) other fixed assets	(74)	(200)
1.10	Loans to other entities	(98)	(158)
1.11	Loans repaid by other entities	0	0
1.12	Other (provide details if material) Loans repaid to associated entities	0	0
		(267)	(267)
	Net investing cash flows	(439)	(625)
1.13	Total operating and investing cash flows (carried forward)	(1,485)	(2,577)

1.13	Total operating and investing cash flows (brought forward)	(1,485)	(2,577)
Cash flows related to financing activities			
1.14	Proceeds from issues of shares, options, etc.	2	3
1.15	Proceeds from sale of forfeited shares	0	0
1.16	Proceeds from borrowings	0	0
1.17	Repayment of borrowings	(12)	(26)
1.18	Dividends paid	0	0
1.19	Other (provide details if material)		
	Option Agreement Payment	0	(135)
	Share Issue Costs	0	(63)
Net financing cash flows		(10)	(221)
Net increase (decrease) in cash held		(1,495)	(2,798)
1.20	Cash at beginning of quarter/year to date	5,627	6,930
1.21	Exchange rate adjustments to item 1.20	0	0
1.22	Cash at end of quarter	4,132	4,132

**Payments to directors of the entity and associates of the directors
Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	199
1.24	Aggregate amount of loans to the parties included in item 1.10	0

1.25 Explanation necessary for an understanding of the transactions

Management Fees, as per agreement, were paid during the quarter to a company of which Mr GH Solomon and Mr DH Solomon are directors.
Professional Fees were paid during the quarter to a company of which Mr GT Le Page is a director.
Bona-fide reimbursement of expenses for the period to 31 December 2006
Directors Fees and Superannuation paid during the period.

Non-cash financing and investing activities

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

Nil

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest.

Not applicable

Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	Nil	Nil
3.2 Credit standby arrangements	Nil	Nil

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	25
4.2 Development	
Total	25

Subsequent to end of quarter additional capital has been raised to fund part of this expenditure.

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	4,132	5,627
5.2 Deposits at call	0	0
5.3 Bank overdraft	0	0
5.4 Other (provide details)	0	0
Total: cash at end of quarter (item 1.22)	4,132	5,627

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements acquired or increased			
	Geothermal Licences held in the name of Eden Energy Ltd			
	GEL 166	Licence granted	100%	100%
	GEL 167	Licence granted	100%	100%
	GEL 168	Licence granted	100%	100%
	GEL 169	Licence granted	100%	100%
	GEL 175	Licence granted	100%	100%
	GEL 176	Licence granted	100%	100%
	GEL 177	Licence granted	100%	100%
	GEL 185	Licence granted	100%	100%
	Outstanding Petroleum Exploration Licence Application in the Name of Eden Energy Ltd PELA 183			

Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1	Preference +securities (description)			
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions			
7.3	122,384,993	67,177,606		
7.4	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs			
7.5	+Convertible debt securities (description)			
	NOT APPLICABLE			

7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	Options	86,848,165 950,000	32,751,300 NIL	<i>Exercise price</i> 20 cents 25 cents	<i>Expiry date</i> 30 Sep 2009 30 Aug 2009
7.8	Issued during quarter	NIL	NIL		
7.9	Exercised during quarter	NIL	NIL		
7.10	Expired during quarter	NIL	NIL		
7.11	Debentures <i>(totals only)</i>	NOT APPLICABLE			
7.12	Unsecured notes <i>(totals only)</i>	NOT APPLICABLE			

Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.

RAYMOND FRANCIS BUSCALL – COMPANY SECRETARY

Date: 31 January 2007

Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities.** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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