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A Major Alternative Energy Opportunity

Presentation by:
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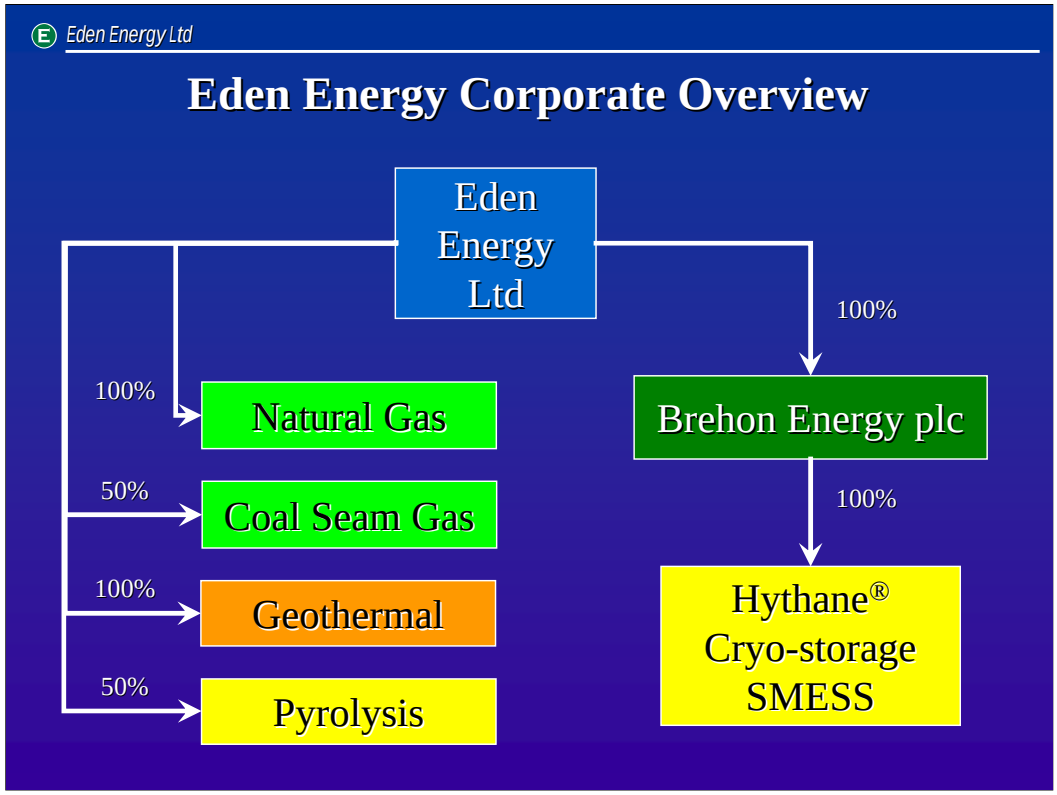
Executive Chairman
December 2006



Eden Energy Ltd is a diversified clean energy company that listed on the Australian Stock Exchange in May 2006. Eden has interests in hydrogen storage & transport fuel systems, including the low emission Hythane® hydrogen-methane blend, a revolutionary cryogenic storage & superconducting magnetic electrical storage device, coal seam & abandoned mine methane, conventional gas, low temperature pyrolysis research into hydrogen production & geothermal energy production.

All these aspects of Eden's business are part of an integrated strategy to become a major global participant in the alternate energy market, particularly focussing on the clean energy transport market, producing hydrogen without any carbon emissions, transporting the hydrogen to markets & providing the engines to power hydrogen-based transport & energy solutions.

Hydrogen & Hythane®

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Hythane Company LLC

A wholly owned subsidiary of Eden Energy/Brehon Energy

Products

- **Hythane®** technology - a mixture of natural gas & hydrogen
- **Hythane®** - production and dispensing equipment
- **Cryogenic technology** - fuel storage/pipes/valves
- 14,000ft^2 R&D facility in Littleton, Colorado
- World class team of employees and consultants
- Owns key Patents and Trademarks

Eden Energy, through its wholly owned subsidiary Hythane Company LLC, controls a range of market-ready technology relating to the use and distribution of Hythane® - a patented blend of hydrogen and Natural Gas (methane).

Hythane Co also controls a range of technology relating to cryogenic storage systems including tanks, pipes and valves.

Hythane Co has a continuing programme of research and development activities to refine and improve existing products as well as invent new products.

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World Class Technical Team

- **Frank Lynch** - invented Hythane, 35 years H_2 experience
- **Dr Tom Flynn** - 50 years NASA related H_2 projects
  - wrote leading texts on cryogenic engineering
- **Dr Bob Rudland** - 30 years experience in H_2 in aerospace
- **Dr Glen McIntosh** - 50 years NASA H_2 fabrication expert
- **Greg Egan** - 25 years experience in H_2
- **Roger Marmaro** - co-invented Hythane -15 years
- **Justin Fulton** - leading gas combustion engineer
- **Steve Hensley** - 25+ years in cryogenics

Hythane Co's people are a key asset, with consultants and staff including the best people available on cryogenic engineering and hydrogen fuel systems.

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Patents and Trademarks

- Hythane® Patent - USA (granted)
- Hythane® Blender - Worldwide (application)
- Cryogenic Storage Tank - Worldwide (application)
- Portable Superconducting Battery - Worldwide (application)
- Cryogenic Hythane® - (LNG/H_2)- Worldwide (application)
- Hythane® Operating System - Worldwide (application)
- Hythane® Trademark - USA, Canada, Australia (granted)
  - India, China, Singapore (appln)
- Further patents under development

Hythane's intellectual property includes patents and Trademarks on all of the key components in its technologies.

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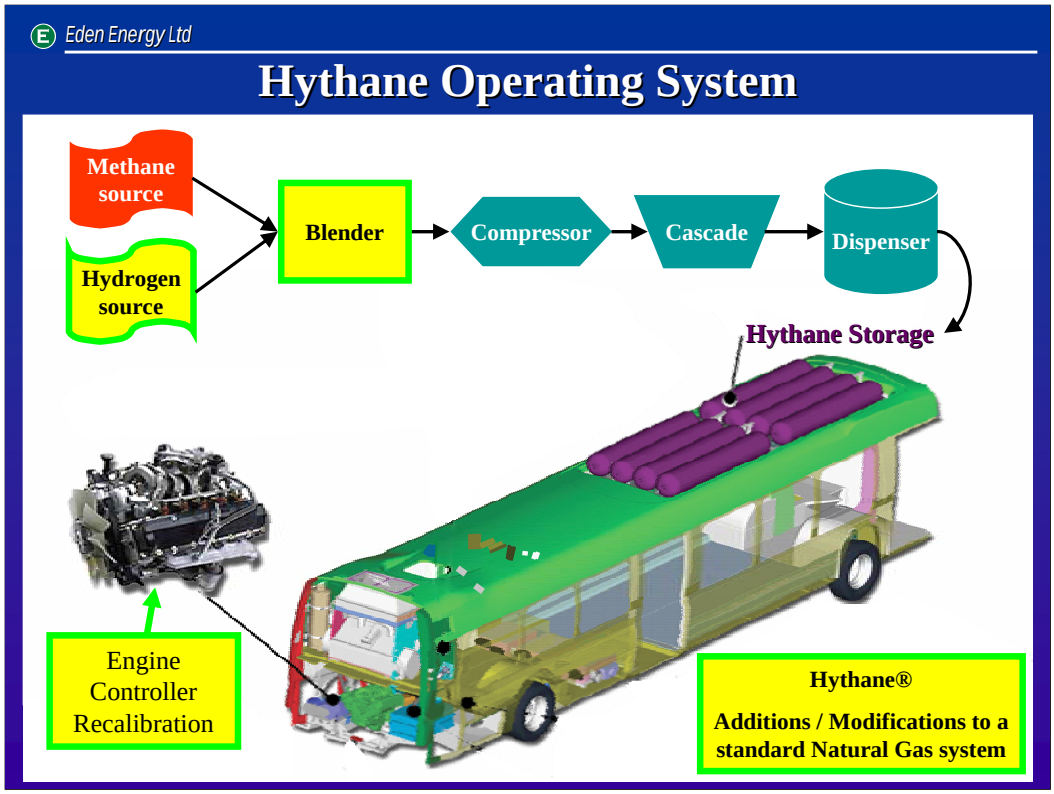
Hythane® - *the transition fuel*

- Low-cost technology
- Proven by over 15 years real world testing
- Uses existing Natural Gas/H_2 infrastructure
- 5-7% H_2 (by Energy) blended with Natural gas
- Does not require high purity H_2, can use waste stream H_2
- Delivers 50% reduction in NO_x compared with NG
- Suitable for use with CNG / LNG / Dual fuel

Hythane offers ready-to-use technology that bridges the divide between today's engines and a future hydrogen economy.



Flow diagram showing Hythane® operating system

Modifications to standard Natural Gas system – hydrogen source, blender & engine controller – are highlighted in yellow & green

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CNG / Hythane® Dispensers

LHS = standard compressed natural gas dispenser

RHS = Hythane® dispenser

Both are essentially identical, the main difference being a re-calibration to the metering required in the Hythane® dispenser

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LNG Vehicles in California

LA/DoE Clean Corridor Project

LNG is already in use for heavy vehicle engines in normal commercial operations

Examples include the prime movers (illustrated) being used in Los Angles as part of the “Clean Air Corridor” project, and, trucks in WA

Conversion of these types of vehicles to Hythane® is straightforward and immediately reduces the emissions of NO_x

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Target markets for Hythane®

All Natural Gas Markets

All markets either with existing natural gas infrastructure or planning natural gas infrastructure are target markets for Hythane®.

Those markets with particularly bad photochemical smog problems and large populations, such as India and China, are of particular interest and Eden is focusing attention there.

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Factors driving transition to Hydrogen

- Concerns over “Peak Oil” – the point after which discovery and production cannot meet demand
- Concerns about energy independence
- Concerns about over-dependence on Middle East oil
- Concern over global climate change and global warming
- New emission standards – USA / Europe
- Local Air Pollution – NO_x emissions = smog

There are a number of issues underlying the move to a “Hydrogen Economy”

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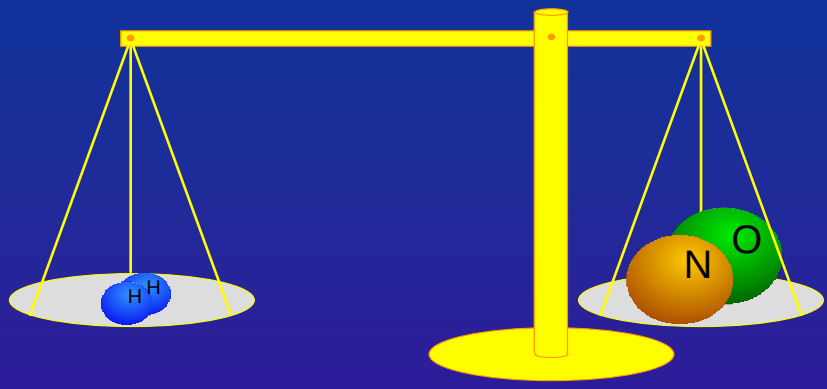
Hythane® - the leveraged use of hydrogen



A small amount of H_2 can give big pollution reductions

5-7% hydrogen (by energy) ➔ 50% reduction in NO_x

Hythane® reduces NO_x by 7+ times more than if used as pure H_2

Because hydrogen is expensive and difficult to store, we want to maximize the benefit derived per dollar of excess fuel cost.

"Leverage" is a measure of cost-effectiveness.

Consider 100 buses.

If hydrogen was used exclusively in 7 of them, e.g. in a fuel cells, and the remainder use CNG - it gives a 7% reduction in NO_x emissions for 7% H_2 by energy

but,

If Hythane® is used in all 100 buses, then for the same amount of 7% H_2, a 50% reduction in NO_x can be achieved.

This is the Hythane® leverage advantage

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Suitable Hydrogen Sources

- Steam reformation of Natural Gas methane (produces H_2, CO & CO_2)
- Electrolysis of water (produces H_2 & O_2)
- By-product H_2 from industrial waste streams, e.g.
  - Steel mills
  - Chlor-alkali and fertiliser plants
  - Glass Float plants
- Pyrolysis of Natural Gas methane (produces H_2 & C)
- Low purity H_2 (90% +) is suitable for Hythane®

Hydrogen is not naturally present in any significant quantities on Earth, so where is the hydrogen to make Hythane® going to come from?

Steam reformation is currently the main, large-scale, industrial process for making hydrogen, however it has significant disadvantages in terms of carbon emissions.

Electrolysis is a relatively expensive & inefficient way to make hydrogen (however, efficiencies increase with water temperature, so hydrogen production involving geothermal power offers the potential for synergies)

By-product hydrogen is readily available, though the volumes and control of the supply are not ideal.

The current pyrolysis approach is a high cost, high temperature process. Research by Eden's partners at the UQ into low temperature, catalytic pyrolysis is delivering encouraging early results, promising to deliver hydrogen & carbon black directly, with major advantages from a carbon economy perspective.

A key advantage of Hythane compared to fuel cells is that Hythane only requires relatively low purity gas (>90% H_2) whereas fuel cells need H_2 >99.99% purity to avoid contamination of the cells.

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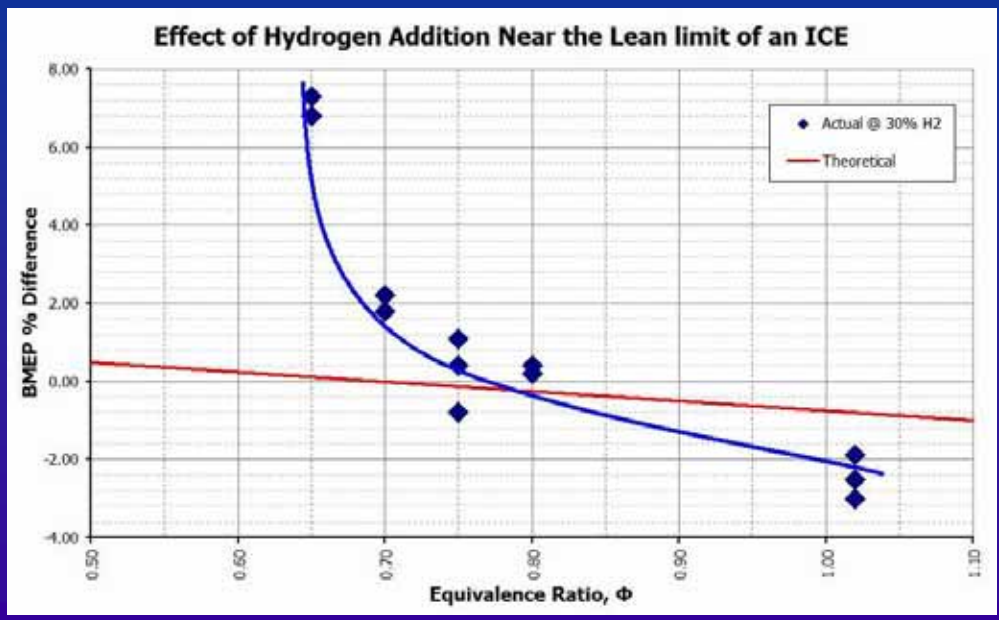
Adding H_2 near the lean limit increases power



•Brake Mean Effective Pressure (BMEP) is a very effective yardstick for comparing the performance of one engine to another, and for evaluating the reasonableness of performance claims or requirements – simply put, is a measure of 'power'

•For completeness, the definition of BMEP is: ***the average pressure which, if imposed on the pistons uniformly from the top to the bottom of each power stroke, would produce the measured (brake) power output.***

•Note that BMEP is purely theoretical and has little to do with actual cylinder pressures. It is simply an effective comparison tool.

•The BMEP % difference in the difference between a conventional engine & an engine with H_2 added

•The calculated results for adding hydrogen are shown by the red line – with a result of only 0.50% increase in BMEP predicted for an equivalence ratio of 0.5

•The actual, real world, results are shown in blue, with a 7% increase in the BMEP recorded

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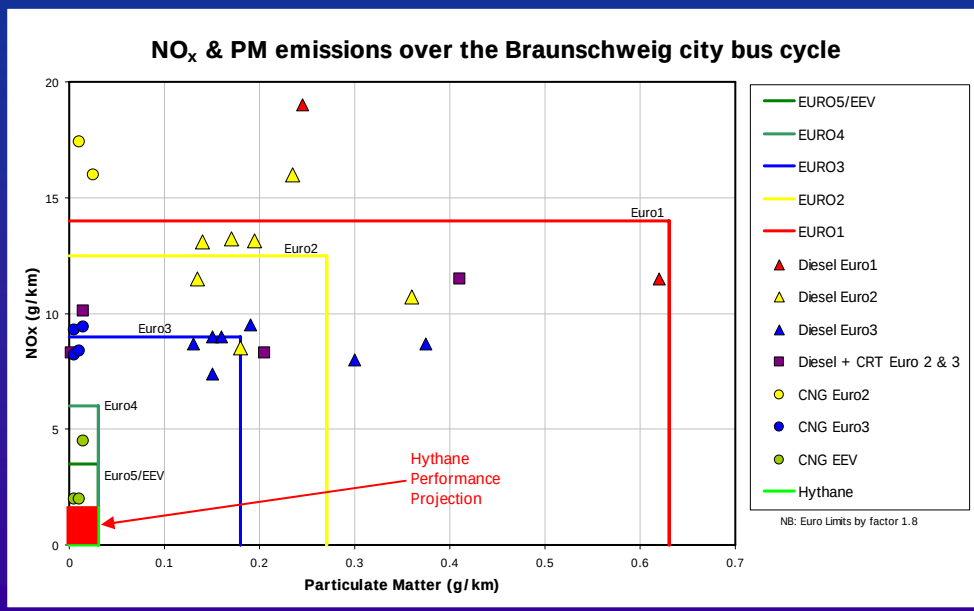
Hythane® meets Euro 1 to Euro 5



- Euro emissions standards shown by coloured boxes, based on emissions per kilometre of particulates and NO_x
- Diesel engine results shown by triangles – very difficult to achieve better than Euro 3 without adding expensive systems to manage the emissions (costs > $10,000 per engine predicted)
- Gas engine results as circles
- Yuchai gas engine, after receipt by by Hythane Co, after initial calibration was at >Euro 2 with NG, & with Hythane achieved >Euro 4

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Timeline of Hythane® Projects

- 1990 HCI pickup truck – first Hythane® vehicle
- 1992 Denver – 3 light truck comparison project
- 1995-96 Montréal – 2 bus pilot project
- 2002-04 Palm Springs, California – 4 bus pilot project
- 2005 China – Yuchai engine conversion
- 2006-07 Projects planned – USA, India, Australia

Hythane® is a mature, market ready product

A series of tests and trials have demonstrated the reliability and performance of Hythane® since 1990.

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First Hythane® Vehicle 1990

5% Hydrogen (by Energy Content), Balanced CNG

Tanks under truck give 250km range

Hydrogen Components Inc (HCI) first Hythane® vehicle

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Denver Hythane® Project 1993

5% energy H_2 in CNG

Parked in the shape of an H, these 3 trucks were tested by the Colorado Dept. of Health.

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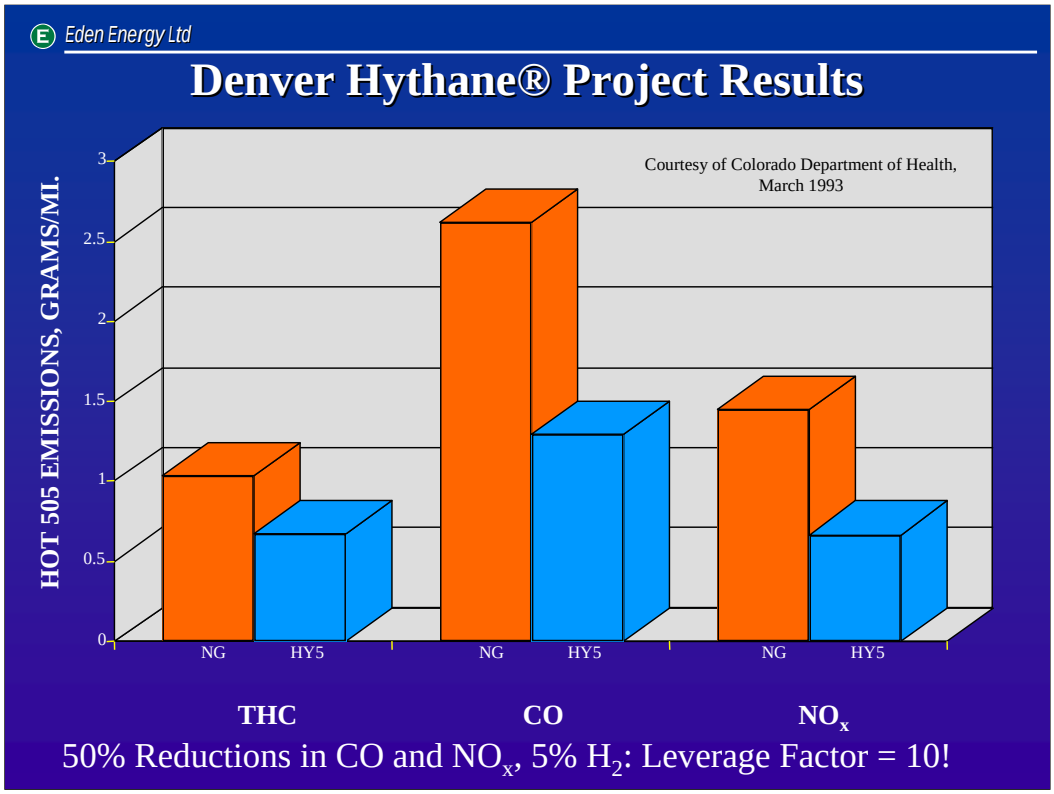
Hythane® Bus Projects

Two extensive bus trials of Hythane were completed in Canada (1993-95) and California (2002-2004).



Pollution results from the Denver project

Natural Gas results in orange on the LHS and Hythane® (5% H_2) on RHS

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Hythane® Strategy

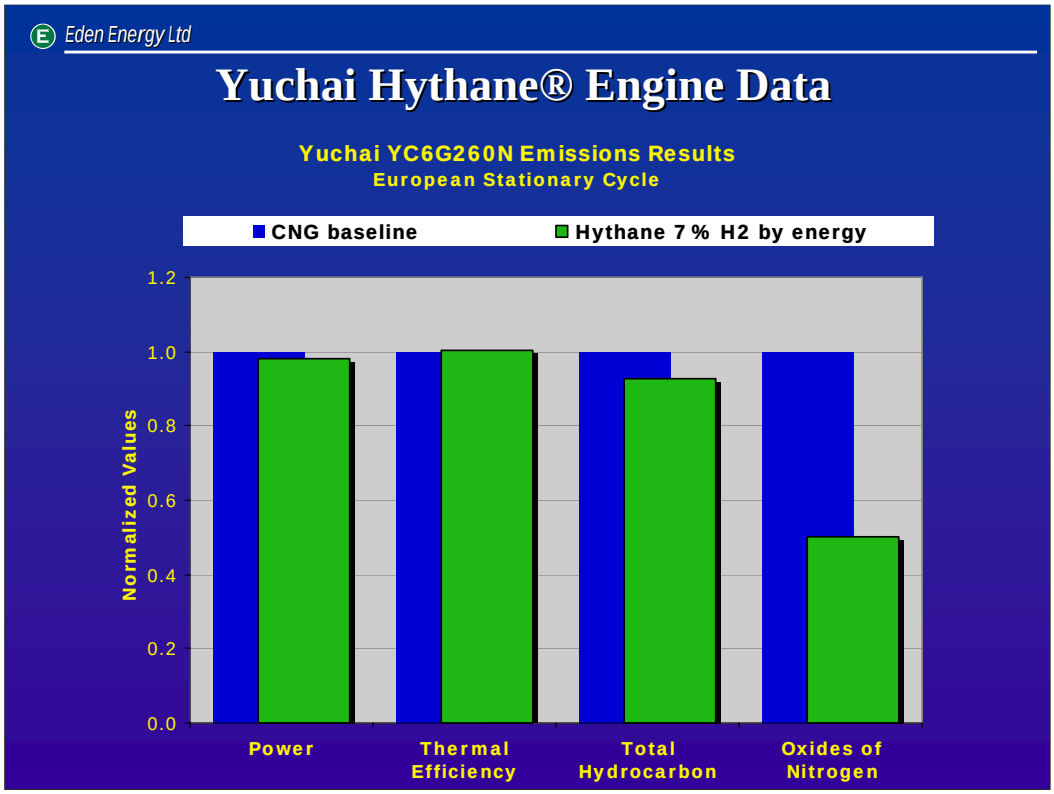
Yuchai Hythane® engine

Objective:

- Reduce NO_x
- Reduce THC
- Increase Efficiency

3 interdependent parameters in adjusting a lean burn CNG engine for Hythane®. Changing any one affects the others.

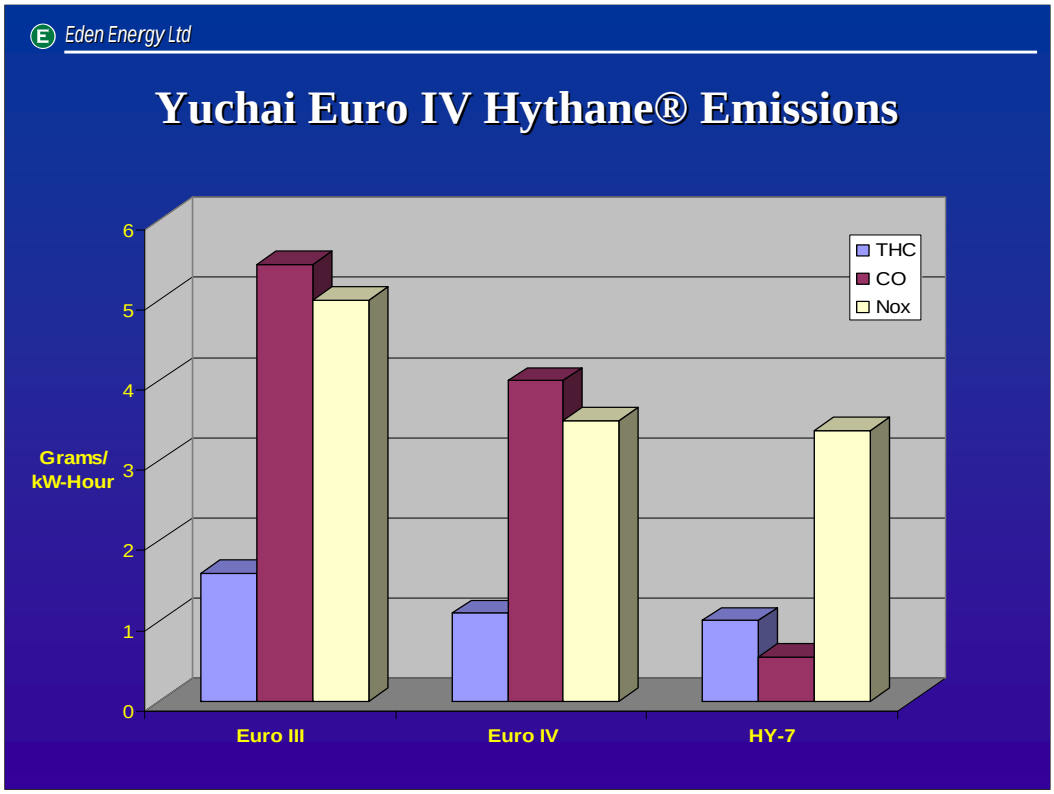
Hythane® objectives are threefold. Each parameter is interdependent on the others.



Comparison of results for the Chinese Yuchai gas engine:

Baseline Natural Gas results in blue on the LHS

Hythane (7% H_2 by energy) on the RHS in green



Comparison of Euro 3 and Euro 4 standards with the results of the Yuchai Gas engine using Hythane® (7% H_2 by energy)

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Indian Hythane® Marketing Progress

- Aims:
  - to convert CNG bus fleets to Hythane®
  - to convert generators to Hythane®
  - to convert CNG taxis, autorickshaws to Hythane®
  - to target fleet truck operations - CNG / Dual Fuel
- First Hythane® engine conversion underway
- Four Hythane® demonstration projects for Q1/Q2 2007
- Major expansion of NG network over next 5 years

India promises huge markets for Hythane® with strong government support and a major rollout of Natural Gas infrastructure throughout the country.

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USA Hythane® Marketing Progress

- Californian ARB proposal to approve Hythane® as Near Zero Emission Fuel under new emission standards
- First DoE contract for Hythane®/ hydrogen engines
- MOUs for several major demonstration projects signed/ under negotiation in California and northeast USA
- Growing interest from all relevant parties

Hythane Co has a number of important projects nearly finalisation in the USA

The winning of a number of major awards by Hythane is increasing the awareness of Hythane amongst relevant parties.

Australian Hythane® Marketing Progress

- Possible interest in Hythane® bus demonstration project in Perth to use H_2 infrastructure
- Interest in developing Hythane® for:
  - LNG / Dual Fuel
  - locomotives
  - gas turbines

Chinese Hythane® Marketing Progress

- Six MOUs signed in 2005
- Yuchai engine conversion- Euro IV achieved
- Preliminary Approval for 16 City Clean Air Program
- Interest from Controller, Engine and Bus manufacturers
- Central Government and Academic Support

Supercritical Cryogenic Storage

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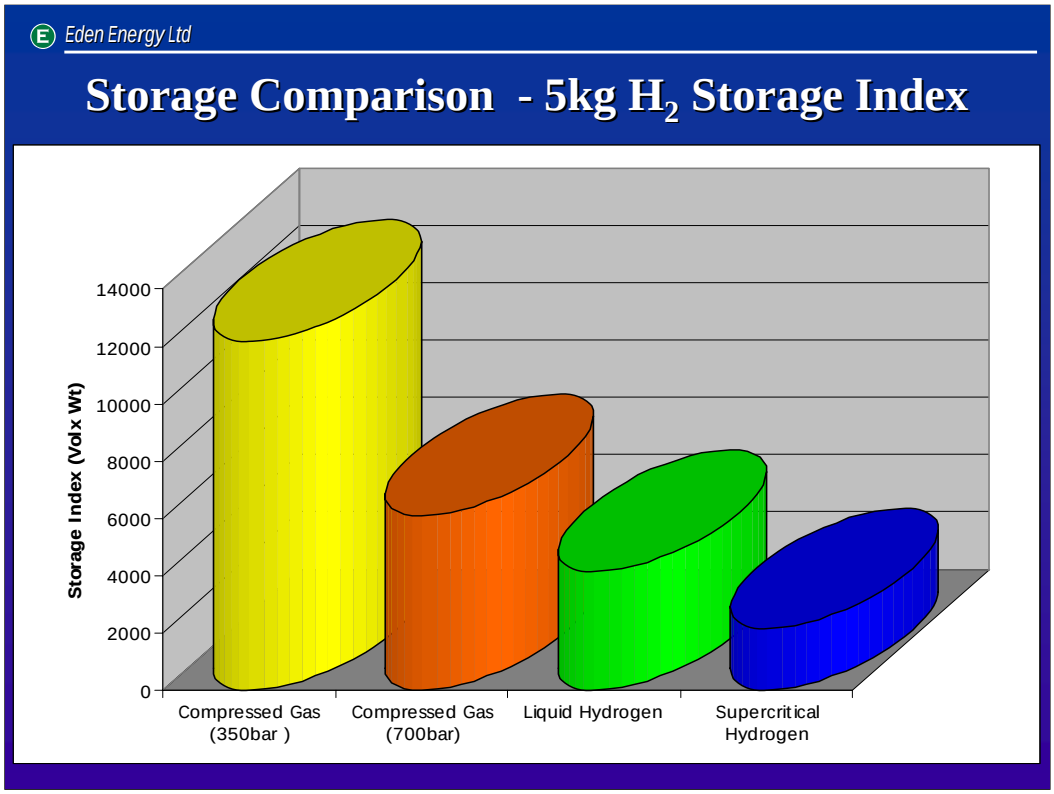
Supercritical Cryogenic Storage

- Suitable for LNG, Hythane, Hydrogen
- Single phase – no ullage, low pressure operation
- Volume, weight and dimensions are smaller
- Long term standby loss is lower
- Greater safety – minimizes potential for detonation
- Sufficient driving pressure for vehicle operation

Hythane® Co has a range of intellectual property in cryogenic technologies.



Comparison of different storage approaches for Hydrogen.

The low energy density of hydrogen is one of the challenges in moving to a hydrogen economy

Cryogenic approaches such as liquid and supercritical hydrogen permit a much greater energy storage than compressed gaseous H_2

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13,000 gal Liquid Hydrogen Storage Tanker

Air Products Hydrogen tanker delivering liquid H_2 to the NASA Space Shuttle

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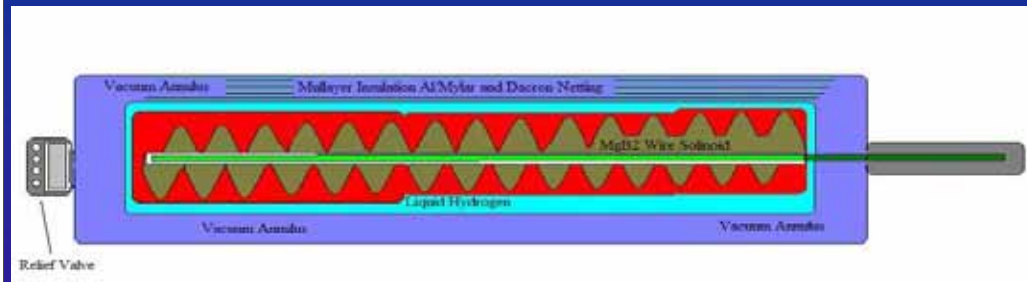
Superconductivity Magnetic Energy Storage System



SMESS Battery

Cryogenic container and method for shielding a cryogenic fluid to make a superconductivity magnetic energy storage system (SMESS)

South Wales
Coal Bed Methane
&
Petroleum

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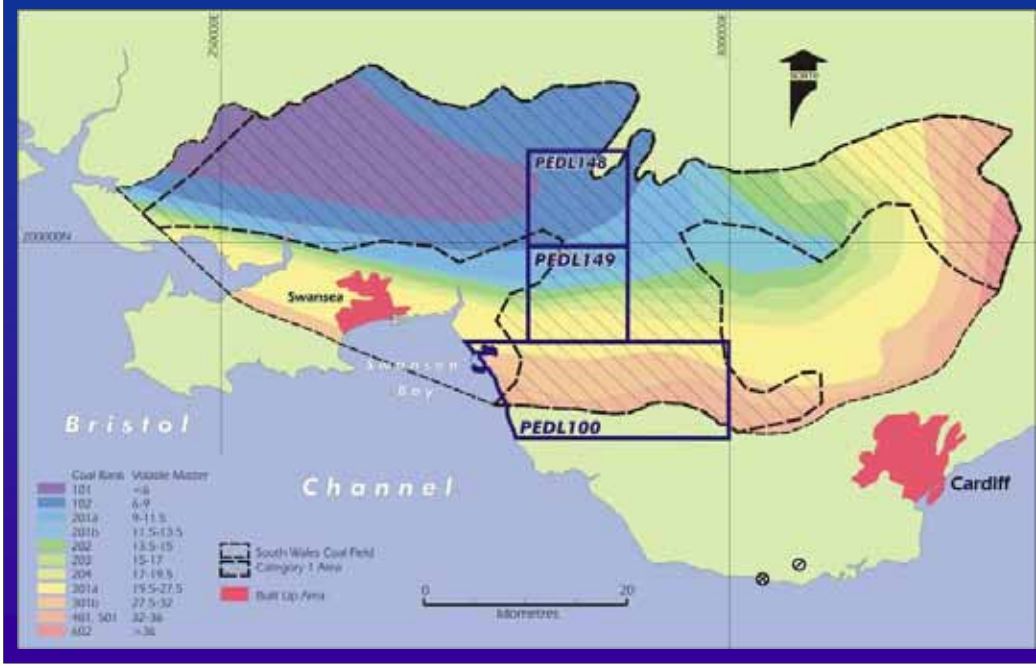
South Wales Coal Rank and Volatile Matter



•Eden is farming into three Petroleum Exploration & Production Licences in South Wales

•Located between Swansea & Cardiff

•Image shows the PEDLs on a background of the South Wales Coalfield – colours show the rank & volatile matter of the coal, which is broadly correlative with the gas content of the coal

•PEDL 100 covers 430km^2 of the more prospective & shallower coal seams in the basin

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South Wales Coalfield & Potential Markets

•1:25,000 scale topographic maps for South Wales, showing a number of the short term, local gas customers located within PEDL100

•Blue line is the M4 motorway

•Three exploration wells have been permitted and are ready to drill

•The wells will enable the gas content, composition and desorption properties of different seams to be quantified as well as permitting direct measurement of the in situ permeability to assess the ease with which the gas can be extracted from the seams and the likely development options that will need to be considered

South Wales Strategy

- Produce methane for use as Hythane®, gas or electricity
- Drilling and testing of CSM – Q1 2007
- Drilling AMM – Q1 2007
- Seismic survey - Conventional – Q1 2007
- Listing to raise funds for CSM/AMM/Conventional
- Drilling Conventional petroleum targets late 2007 or 2008

South Australian Hydrocarbons

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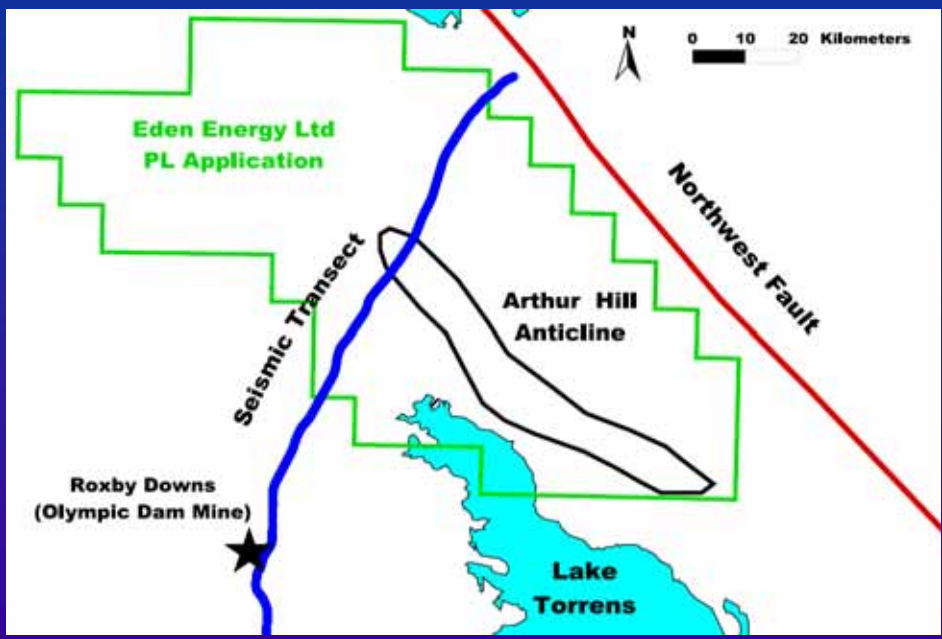
South Australian Hydrocarbons



•Geoscience Australia seismic line (blue line) released 2004

•Significant new sedimentary accumulations imaged by the seismic survey, in particular the Mulgaria Sub-basin of the Adelaide Geosyncline

•Eden consultant geophysicist recognizes flat spot in centre of the Arthur Hill anticline – consistent with gas/water interface

•Review of geology outlines the possible extents of the Arthur Hill anticline & Eden makes Petroleum Exploration Licence application

•Possible major user for gas at BHPB's Olympic Dam operations

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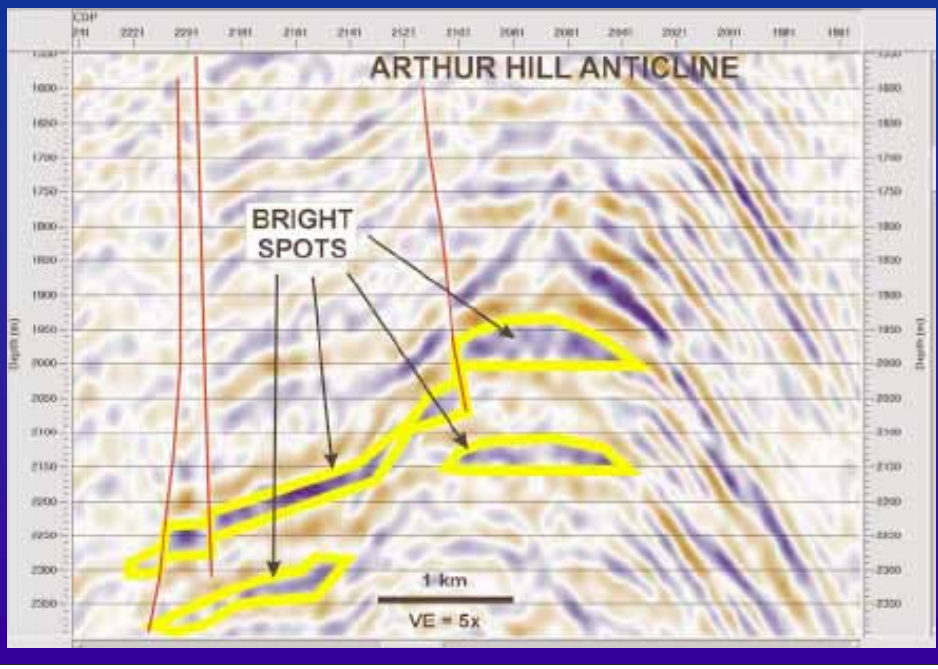
Interpreted Gas pockets on re-processed seismic



•Eden had the GA seismic data reprocessed to enhance the possible gas signature and determine depth to the target

•Image shows a window of depth converted, pre-stack full migration, true amplitude recovery, intercept times gradient seismic section

•Highlighted yellow zones are bright spots with flat bottoms in the core of the Arthur Hill Anticline interpreted as gas pockets.

•Small faults interpreted in the profile may cause minor offset of the reservoir horizons.

•Nature of gas unknown – could be methane, CO_2, or even helium

•Whilst the host rocks are old by petroleum standards (Neoproterozoic, 800-600Ma), the structures are Delamerian in age (500Ma). A number of significant petroleum fields are known in similar age rocks in Eastern Siberia, China, North Africa and even in Australia at Palm Valley, near Alice Springs.

•Suitable source, trap and seal rock sequences are known in the Adelaide Geosyncline.

Geothermal Exploration

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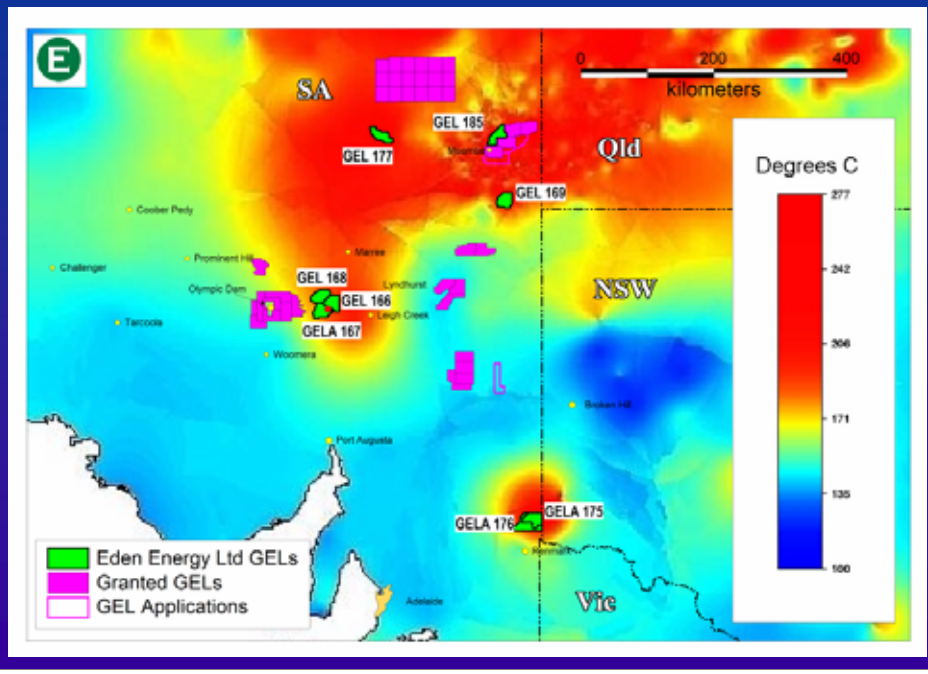
Eden's SA Geothermal Exploration Targets



•Eden holds 8 Geothermal Exploration Licences in SA

•Image shows the predicted temperature at 5km depth (Holgate & Chopra, 2005)

•Eden's Principle targets are Renmark, Witchellina and near Moomba

•Initial aim is to identify geothermal resource, ideally close to infrastructure or markets

•Key ingredients are:

- an area of anomalous heatflow,
- •a sufficiently thickness of sediments to trap the heat (but not too deep – so drilling costs are lower)
- •Natural permeability, to enable circulation and extraction of energy carrying hot water, preferably > 200ºC

•Renmark target is >3km thick trough of sediments, including good insulating coal, with major faults likely to provide permeability

•Witchellina, is located 60km each from Olympic Dam & Leigh Creek – both locations with power lines; the target in interpreted to be an Olympic Dam style iron oxide system, with uranium enrichment providing added heat generation, buried about 3km deep.

•Moomba (and Eden's other GELs) are covering deep hot granite targets, analogous to the Geodynamics target, located to the east of Eden's GEL.

Strategic Plan Highlights

- **HYDROGEN** – develop and market new technologies for production, use and storage of Hydrogen (H_2)
  - Hythane® - India, US, Australia Rollout
  - Low-cost CO_2-free H_2 production R&D
  - Cryogenic storage for Hydrogen, Hythane®, LNG
  - Portable superconducting battery (SMESS)
- **GAS South Wales** - CBM/CMM/Oil-drilling 2007
- **Hydrocarbons** - Sth Australia - drilling 2007
- **Geothermal Energy** - drilling 2007

Projected Revenue Sources

Early cashflow potential…

- Cryogenic division (current)
- Hythane® - Revenue Targets
  - Engine conversions/royalties
  - Sales commission - controllers, engines and vehicles
  - Regional Franchise Fees - China, India, USA
  - Margin on Hythane® fuel
- South Wales gas
- Carbon Credits

Capital Structure

ASX Code (Ticker)	EDE/EDEO
IPO amount	$8.4M
Issue Price	$0.20
Total Shares (EDE)	122.4M
Total Options (EDEO)	87.4M
Share Price (EDE) 4/12/06	27.5 cents
Market Capitalisation	$33.7M

Summary

- Alternative energy projects
- Huge emerging Hythane® markets in India, USA, China
- World leading cryogenic technology and patents
- Low-cost CO_2-free H_2 production R&D
- Major CBM project in Wales ready to drill test – gas price much higher than Australia, lower infrastructure costs
- Large untested hydrocarbon target in SA
- Prospective geothermal licences
- Early cash flow potential from various projects