

Wednesday, 28 July 2010

### Howard Humphreys

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### Recommendation

12 Month Recommendation	Speculative Buy
Investment Outlook	Good
Investment Risk	Moderate-Low

See page 3 of this report for more detail.

### Capital Structure

Last Price	A\$0.18
Ordinary Shares	126.6m
Convertible Notes	7.1m
Fully-Diluted Market Cap	A\$24.1m
Cash*	A\$1.6m
Debt	A\$0m
Enterprise Value	A\$22.5m

Source: OGL

\*Q1 2010 cash plus \$0.5m raising

### Top 5 Shareholders (As at 31<sup>st</sup> May 2010)

Ausinca International	10.34%
AMC Capital SDN BHD	7.96%
Unilease Capital SDN BHD	7.96%
Ms Swee Keen Heang	5.12%
Rothstein Pty Ltd	4.77%

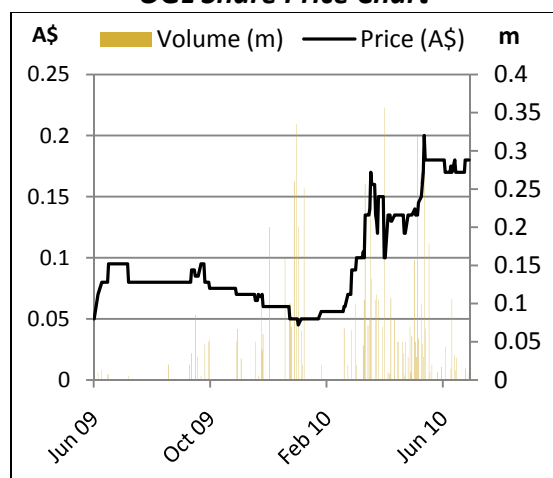
Source: OGL

### Company Board & Management

Non-Executive Chairman	Jack Tan
Managing Director	David Mason
Deputy Chairman	Michael Mo
Non-Executive Director	Neil Stuart
Executive Director	Henry Khoo

Source: OGL

### OGL Share Price Chart



Source: Bloomberg

### Developing coal assets in Indonesia with near-term cash flow potential

- Overseas and General Ltd's ('OGL's') strategic direction has recently changed from that of a biodiesel company, to that of an explorer and developer of Indonesian and Australian coal assets.
- To achieve the objective of becoming a coal explorer, the Company has undergone significant restructuring at the Board level, including the recent appointment of 4 directors.
- Recent capital raisings and debt restructuring has seen OGL raise ~\$1.8m and convert ~\$0.4m of debt to equity, so that the company currently has a cash position of ~\$1.6m.
- OGL has entered into a joint venture with PT Indotrade Resources, who is currently exporting ~2mt of coal p.a. from Indonesia. The JV will operate through PT OGL Indotrade Resources (51% OGL).
- If the OGL defines enough coal of an acceptable quality over its Rahmat Project mining licence, then OGL plans to fast-track mine development with a view for first production in July/August 2010.
- The 37 hole drilling program at Rahmat has been completed. Drilling has confirmed the existence of two coal seams at a shallow depth, with thicknesses between 1.5m and 2.5m.
- OGL has entered into a Memorandum of Understanding with a Chinese entity for the off-take of coal from its Rahmat Project, demonstrating that its coal is of sufficient quality.
- Preliminary reconnaissance at OGL's Jambi Project, Sumatra, has located two seams of 1.0m and 0.8m in thickness that outcrop on either side of an anticline structure (see Figure 1).
- Analysis of a coal sample collected from an outcrop at the Jambi Project has returned a very high energy value of 6,627kcal/kg, moderate ash content and a moderately high sulphur content.
- Preliminary reconnaissance at OGL's Pagar Project has revealed the presence of some high-energy coal in the licence, and potentially some coking coal.

# Company Profile

## Background

Overseas and General Ltd ('OGL') is publicly-listed company, listed on both the Australian Securities Exchange ('ASX') and the CLOB International, Singapore. The Company was previously concerned with the development of its Indonesian biodiesel project, but has since change direction to become a developer of Indonesian coal assets.

*"The Company...has since change direction to become a developer of Indonesian coal assets."*

## Recent Developments

In December 2009 Overseas and General Ltd ('OGL') entered into a joint venture (JV) with PT Indotrade Resources to explore for, and produce, coal in East Kalimantan, Indonesia. In addition, the Company announced on 29<sup>th</sup> December 2009 the sale of its 49% stake in PT Vision Renewable Fuels ('PT Vision'), a company that holds a biodiesel project in Port Dumai. These two developments were part of a wider plan to change the Company's strategic direction from that of a biodiesel company, to that of an explorer and developer of Indonesian and Australian coal assets.

*"...OGL entered into a JV with PT Indotrade Resources to explore for, and produce, coal in East Kalimantan, Indonesia."*

## Changes in the Board's Composition

To achieve the objective of becoming a coal explorer, the Company has undergone significant restructuring at the Board level. The following directors have been appointed to OGL's Board to give it the knowledge and expertise to operate as a coal explorer and developer in both Indonesia and Australia.

- Michael Mo (Deputy Chairman), a lawyer with extensive experience in the resources, construction and real estate industries.
- David Mason (Managing Director), a geologist with 30 years experience in the mining industry, and extensive experience in Indonesia.
- Neil Stuart (Non-Executive Director), a geologist with over 35 years of experience, and a director of a number of ASX-listed companies, including Orocobre Ltd, Elementos Ltd and Bowen Energy Ltd.
- Henry Khoo (Executive Director), a professional company director with an extensive Asian business network.

## Capital Raising and Debt Restructuring

On 8<sup>th</sup> March 2010, at an Extraordinary General Meeting (EGM), the Company's shareholders approved the \$1.3m capital raising and the conversion of \$0.4m of debt to equity. Subsequent to the EGM, OGL raised a further \$0.5m, thus increasing the Company's total working capital to \$1.8m. As a result of these changes to OGL's capital and debt structure, the Company now has around \$1.6m cash at bank and no debt.

## Board & Management

### Jack Tan – Non-Executive Chairman

Jack has more than 20 years of experience in the finance, stockbroking and mining industries. He was the Non-Executive Chairman at e-pay Asia Limited, a leading prepaid mobile phone company based in Malaysia, a Non-Executive Director at Orocobre Limited, an emerging Lithium and Potash producer in Argentina. Jack was a founder and Executive Director of Rocklands Richfield Limited, a successful coal company now owned by Chinese investors. Prior to this Jack founded Norton Gold Fields, which is now a mid-tier gold producer.

### David Mason – Managing Director

David has worked in the mining industry, mainly throughout Australia and Indonesia, for over 30 years. Before joining OGL, David was the Operations Director for Haddington Resources (now Altura Mining) a mineral resource company which took over the Australian, Indonesian and Madagascar resource investment and mining service companies of Minvest International (a group he co-founded and managed). David was formerly General Manager of the very successful Indonesian Swabara Group, which developed the substantial Adaro Indonesia coal mine and the MHU coal mine.

### Michael Mo – Non-Executive Deputy Chairman

Michael has extensive employment experience throughout Asia, Australia and United Kingdom in the construction, real estate, trading and resources industries. He is widely recognized as an experienced Investment & Management Executive and is a Director of several large sized construction and trading companies in China. Michael represents the Botai Consortium that, in conjunction with Qinhe Energy, has recently won the rights to own the major Ridglands coal lease west of Newcastle from the New South Wales Government.

### Neil Stuart – Non-Executive Director

Neil is a remarkably successful exploration geologist with over 35 years of experience. Neil has worked throughout the world with Utah Exploration and later with Marathon Petroleum, in its successful Australian coal ventures. Neil was a founding Director of Oropлата Ltd and identified the highly prospective Cerro Negro Epithermal Gold Project. He is currently the Non-Executive Chairman of Bowen Energy Ltd, a Non-Executive Director of Orocobre Limited, and a Non-Executive Director of Axiom Mining Limited.

### Henry Khoo – Executive Director

Henry has extensive sales, marketing and management experience in the consumer and durable products industries in the Asia Pacific region, notably in Malaysia and Australia. He has made significant contributions in the fields of corporate evaluations, valuations, mergers & acquisitions and the marketing of an auto battery company in Australia.

**ASX: OGL**

# Investment Outlook

## Investment Outlook

Investment Outlook	Our Rating
1. Commodity Outlook	<i>Excellent</i>
2. Exploration Potential	<i>Good</i>
3. Product Quality/Grade	<i>Acceptable</i>
4. Infrastructure Access	<i>Good</i>
5. Production Costs	<i>Good</i>

**1. Commodity Outlook: The outlook for coal demand in Indonesia is excellent and the outlook for Indonesian exports is similarly positive.**

The Indonesian government is aggressively pursuing the development of coal-fired power stations, which is expected to boost domestic demand. While, due to Indonesia's location (close to China and India), it is poised to take advantage of growing regional coal demand.

**2. Exploration Potential: The areas around both the Rahmat and Jambi Projects have the potential to contain number of additional coal deposits.**

For example, Small quantities of coal were mined at the Chandra Jaya exploration licence, at the Jambi Project, during 2009, but coal mining ceased when the owners encountered operational difficulties and ran out of working capital. A total of 20,000t has been mined from an adjacent licence, but operations ceased for similar reasons.

**3. Product Quality/Grade: Sampling of outcrops and drill cores has indicated that the Company may have access to some good-quality coal (see Table 1).**

**Table 1: Analysis of Coal at the Rahmat and Jambi Projects**

Coal Property	Rahmat	Jambi	Basis
GCV <sub>1</sub> (kcal/kg)	5,500	6,627	adb <sub>2</sub>
Inherent Moisture (%)	15	3.8	adb <sub>2</sub>
Total Moisture (%)	26	9.7	ar <sub>3</sub>
Ash (%)	4.0	16	adb <sub>2</sub>
Sulphur (%)	0.3	2.5	adb <sub>2</sub>

1. Gross Calorific Value, 2. Air-dried basis, and 3. As received Source: OGL

**4. Infrastructure Access: Both the Rahmat and Jambi Projects have access to infrastructure, and trucking-shipping distance for both projects is minimal.**

The Rahmat Project is located in an established coal mining district, with infrastructure and trucking and shipping routes. The Jambi Project is located near a 23km haul road to a trans-shipment point that can handle 230ft barges. There is an estimated barging distance of 100km to port.

**5. Production Costs: From similar producing Indonesian coal deposits and management guidance Seismic Research estimates that the Rahmat project will be a low-cost one.**

Seismic Research, with guidance from OGL, estimates that operating costs will be in the range of A\$40-50/t of coal (including royalties). If we use an Indonesian coal price of A\$65-70/t, this gives a robust operating margin of \$15-30/t.

## Investment Risk

Investment Risk	Our Rating
1. Commodity Risk	<i>Very Low</i>
2. Exploration Risk	<i>Moderate</i>
3. Development Risk	<i>Low</i>
4. Production Risk	<i>Moderate</i>
5. Government-related Risk	<i>Moderate</i>

**1. Commodity Risk: The demand for thermal coal is driven by the demand for electricity that, in turn, is driven by income growth.**

Thermal coal has low commodity price risk, especially in comparison metallurgical coal. Demand is driven by the construction of coal-fired power stations, which is driven by electricity demand and income growth. Generally, the demand for thermal coal is not cyclical.

**2. Exploration Risk: While there is a lot of potential for coal discoveries in Indonesia, this type of grass roots exploration is inherently risky.**

While most of the areas OGL is exploring have are proven coal producing regions, the licences themselves are often under-explored by modern techniques. This sort of 'grass roots' exploration is inherently risky.

**3. Development Risk: Only a regionally-approved mining and environmental study (UKL/UPL) is needed at Rahmat, not the more comprehensive AMDAL study.**

OGL plans to fast-track mine development with a view for first production in July/August 2010. Development time is significantly cut as the mining licence occupies a small block of land (<100Ha), which means that only a simple mining and environmental study (UKL/UPL) is needed, in contrast to the more comprehensive AMDAL study.

**4. Production Risk: Strip ratios for the structures that OGL is targeting can sometimes be much higher than expected, increasing operating costs above expectations.**

OGL is targeting both outcropping anticline (see Figure 1) and syncline coal structures. If the structure dips more steeply than originally anticipated then the strip ratio can be much high than expected. An increase in the strip ratio leads to a higher than expected operating cost.

**5. Government-related Risk: the new mining legislation, while providing more certainty, is somewhat un-tested and does not give life-of-mine approvals.**

Under the new Law on Mineral and Coal Mining the Contract of Work (PKP2B) system will no longer be available. Under the PKP2B system, investors were provided with the necessary approvals to conduct mining activities for the full life-of-mine. But under the Law investors will need to apply for separate exploration and production licences. This is seen by some investors to add an extra level of risk.

## Indonesian Operations

In December 2009 OGL entered into a JV with PT Indotrade Resources ('PT Indotrade'), an Indonesian subsidiary of the Malaysian-owned, Golden Focus Group Ltd (Hong Kong). PT Indotrade is currently producing coal in Indonesia, and is exporting around 2mt p.a. to China and South Korea. With the aim of developing coal assets in Indonesia, the JV will operate through PT OGL Indotrade Resources ('OGL Indotrade'), an Indonesian company, in which OGL has a 51% interest.

***"The JV with PT Indotrade will operate through...PT OGL Indotrade Resources...in which OGL has a 51% interest."***

### The Rahmat Project, East Kalimantan

On 24<sup>th</sup> May 2010 OGL announced that it had entered, through OGL Indotrade (51% OGL), into a Contract to Mine (a Surat Perintah Kerja, or SPK) with CV Rahmat Nikmat ('Rahmat'). The SPK covers an IUP mining licence, owned by Rahmat, which is located in an established thermal coal mining region in Samboja, East Kalimantan. An initial payment has been made to secure the contract; the payment is deductible against future royalties payable to Rahmat.

***"[OGL has]...entered, through OGL Indotrade (51% OGL), into a Contract to Mine with CV Rahmat Nikmat..."***

OGL plans to define a small mineable resource over the mining licence. If enough coal of acceptable quality is defined, OGL plans to fast-track mine development with a view for first production in July/August 2010. OGL expects that any potential mine on its licence at Samboja would produce around 50,000t of thermal coal per month.

***"If enough coal of acceptable quality is defined, OGL plans to fast-track mine development..."***

#### Rahmat Drilling Program

OGL has completed a 37-hole, 1,173m drilling program that has identified 2 seams of coal. The seams are separated by 15m to 20m. The upper seam ranges from 1.5m to 2m in thickness, while the lower seam is between 2m and 2.5m in thickness. Both seams sub-crop in the northern part of the licence and dip gently south at around 10 degrees.

All of the holes drilled were down-hole geophysically logged<sup>1</sup> and 7 of the holes have been cored. 8 samples from the cores were sent for laboratory analysis, the results of which show the coal to be a good quality thermal product (see Table 2).

***"Drilling has confirmed the existence of two seams at a shallow depth with a combined thickness of up to 4.1m."***

1. Down-hole geophysical logging, or commonly 'sonic logging', is used to determine the density of material between drill holes. This done because coal is usually much less dense than the surrounding rock.

**Table 2: Assay Results from the 8 Core Samples**

Coal Property	Low-High	Basis
Gross Calorific Value (kcal/kg)	5,500	adb*
Inherent Moisture (%)	15	adb*
Total Moisture (%)	26	
Ash (%)	4	adb*
Sulphur (%)	0.3	adb*

\*Air-dried basis

Source: OGL

### Mining and Environmental Approvals

As the Rahmat mining licence covers less than 100Ha, only a simple mining and environmental study (UKL/UPL) is required for approval by the district government. This is in contrast to the more comprehensive AMDAL, which is required for larger licences and is approved by the central government. Preparation of the UKL/UPL environmental study for the Rahmat mining licence has commenced.

***"As the mining licence covers less than 100Ha, only a simple mining and environmental study (UKL/UPL) is required"***

Topographical mapping over the tenement is planned to commence at the end of June/beginning of July 2010. OGL has chosen a mining contractor, negotiated terms and has requested equipment mobilisation for late July 2010. An adjacent licence owner has recently commenced mining operations and OGL is discussing options for sharing transportation and infrastructure facilities to streamline development and reduce capital expenditure.

***"OGL has chosen a mining contractor, negotiated terms and has requested equipment mobilisation for late July 2010"***

### Off-take Agreement

On 18<sup>th</sup> June, OGL announced that it had entered into a MoU with a Chinese entity, Zhejiang Materials Industry Fuel Group Co. Ltd ('Zhejiang') for the off-take of coal from its Rahmat coal project. Zhejiang is the largest coal supplier in the Zhejiang Province with 2008 sales of 13.7mt of coal and 120,000t of steel products. This is an important development as it indicates that the coal at Rahmat is of sufficient quality for the Chinese market.

***"...[this development] indicates that the coal at Rahmat is of sufficient quality for the Chinese market."***

## The Jambi Project, Sumatra

OGL Indotrade (51% OGL) has entered into an Option Agreement Term Sheet to acquire outright the CV Chandra Jaya exploration licence (covering 258Ha), and to jointly operate the PT Sokki Prima coal licence (covering 659Ha), located near Jambi on the island of Sumatra. The Option Agreements have terms of 12 months and minimum cash payments. They have also been structured so that payment occurs towards the back end and can be deducted against royalties.

### Previous Coal Mining in the Area

Small quantities of coal were mined at Chandra Jaya during 2009, but coal mining ceased when the owners encountered operational difficulties and ran out of working capital. A total of 20,000t has been mined from an adjacent licence, but operations ceased for similar reasons. OGL has entered into discussions for joint operations over this licence, which covers some 2,500Ha. The owners of the licence reported that coal seams were up to 2 metres in thickness and that the seams dipped slightly.

*"A total of 20,000t has been mined from an adjacent licence... OGL has entered into discussions for joint operations..."*

### Preliminary Exploration

Minimal exploration was carried out prior to the previous mining operation at Chandra Jaya. Preliminary reconnaissance work carried out by OGL has located two seams of 1.0m and 0.8m in thickness that outcrop on either side of an anticline structure (see Figure 1). The dips of the coal seam are around 10 degrees on the northern side, and 50 to 60 degrees on the southern side, of the anticline (see Figure 1).

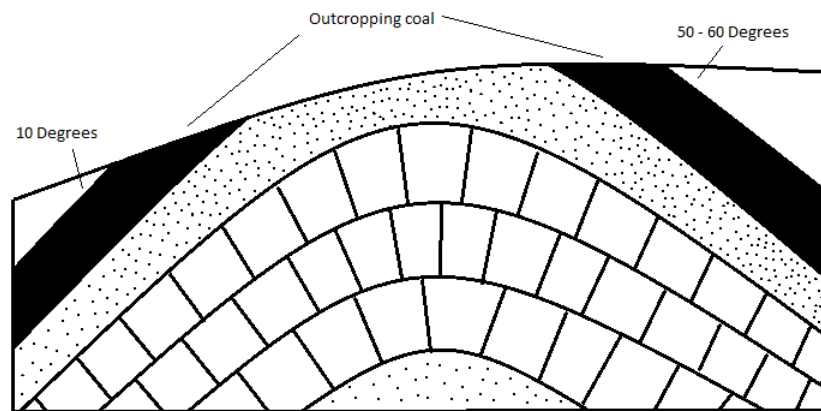
*"Preliminary reconnaissance...has located two seams...that outcrop on either side of an anticline structure (see Figure 1)."*

### Infrastructure and Transportation

Due to the high energy content of the coal (see Table 3), OGL will consider selling the product coal to both the domestic and export markets. There is a 23km haul road to Pelabuhan Taman Raja on the Tungkal River, which is capable of handling 230ft barges. Alternatively, the coal could be hauled 93km to Kelagian, a loading site further downstream that is capable of handling 275ft barges. There is a 100km barging distance for the former option and a 75km barging distance for the latter.

*"There is a 23km haul road to Pelabuhan Taman Raja on the Tungkal River, which is capable of handling 230ft barges."*

Figure 1: Typical Anticline with Outcropping Coal



Source: Seismic Research

Table 3: Laboratory Analysis of an Outcrop Sample, Jambi Project

Coal Property	Value	Basis	Level of Property
Gross Calorific Value (kcal/kg)	6,627	Air-dried basis	High
Inherent Moisture (%)	3.8	-	Low
Total Moisture (%)	9.7	-	Moderate
Ash (%)	16	Air-dried basis	Moderate
Sulphur (%)	2.5	Air-dried basis	Moderate-High

Source: OGL and Seismic Research

### **The Pagar Project, East Kalimantan**

OGL has an option to acquire the PT Pagar Benua Borneo ('Pagar') concession, covering 23,960Ha in the West Kutai district of East Kalimantan, an established thermal coal mining district. Through OGL Indotrade (51% OGL), the Company has entered into a joint operating agreement with the owners of the Pagar concession. This joint operating agreement gives OGL access to 10,000Ha of the concession, allowing the Company to mine and sell coal from the area. An initial payment has been made to secure the contract, and a royalty will be paid to the owner through the life of the project.

***"OGL has an option to acquire the Pagar concession, covering 23,960Ha in the West Kutai district of East Kalimantan..."***

#### **Preliminary Exploration**

Preliminary reconnaissance by OGL has revealed the presence of some high-energy coal in the licence, and potentially some coking coal. OGL has commenced regional exploration with the objective of finding a medium-sized, good-quality coal resource that can be fast-tracked to production. Several coal transportation options are being considered for shipment to the coast. Existing infrastructure in the region is good since West Kutai is an established coal-producing region.

***"OGL has commenced regional exploration with the objective of finding a medium-sized, good-quality coal resource..."***

### **Australian Operations**

OGL has formed an alliance with Jincheng Zhongjia Coal Industrial Co. Ltd ('Jincheng'), a Chinese company, to actively seek coal projects in Australia. An Australian company is being incorporated to operate this JV with Jincheng holding 90% and OGL holding 10%. OGL's share in the JV is a combination of free and carried interests, with Jincheng fully responsible for all the funding of the JV.

***"OGL has formed an alliance with Jincheng Zhongjia Coal Industrial Co. Ltd...to actively seek coal projects in Australia."***

### **Jincheng Zhongjia Coal Industrial Co. Ltd ('Jincheng')**

Jincheng's main investment is in a company called Qinhe Energy Group Co. Ltd. ('Qinhe Energy'). Qinhe Energy is a privately-owned company that was incorporated in 2001 to participate in the privatisation of the Qinshui County government's coal assets. Qinhe Energy currently produces close to 7mt p.a. of coal, while a further mine with a planned output of 8mt p.a. is currently under development.

***"Jincheng's main investment is Qinhe Energy...that currently produces close to 7mt p.a. of coal..."***

In a recent transaction, the Botai Consortium, of which Qinhe Energy is a significant member, entered the Australian coal industry by securing the Ridgeland Coal Area in NSW through a NSW government open tender. Qinhe Energy's objective is to become a significant coal miner in both China and Australia. Michael Mo, who was recently appointed as Deputy Chairman of OGL, also represents Qinhe Energy and the Botai Consortium in Australia.

***"...the Botai Consortium, of which Qinhe Energy is a significant member, entered the Australian coal industry by securing the Ridgeland Coal Area in NSW..."***

# Peer Comparison

## Peer Comparison, JORC Resources

Table 4 and Table 5 compare, respectively, the JORC resources and coal quality of the Indonesian coal projects of 6 ASX-listed companies. The coal qualities are indicative of a project's coal resource, when a company has a resource. When the company does not, the coal quality is indicative of the project area.

## OGL's Rahmat and Jambi Projects

The Rahmat Project has comparably high energy, while having low ash and sulphur contents. But the inherent moisture, which is the moisture under an air-dried basis, is relatively high. The Jambi Project has very high energy and low moisture for an Indonesian thermal coal, but it also has moderately high levels of ash and sulphur.

**Table 4: Indonesian Coal Resources, ASX-listed Companies**

Company (ASX Code)	Project	Region	Resources (mt)	JORC Category*
Altura Mining Ltd (AJM)	Tabalong Coal Project	South Kalimantan	11.3	Meas, Ind & Inf
Coal Fe Resources Ltd (CES)	Pancaran Abadi Coal Project	East Kalimantan	34.5	Meas, Ind & Inf
APAC Coal Ltd (AAL)	PT Batubara Coal Project	East Kalimantan	18.2	Inf
Pan Asia Corporation Ltd (PZC)	Nadvara Thermal Coal Project	East Kalimantan	19.6	Meas & Ind
	Nadvara Thermal Coal Project	East Kalimantan	5.8	Prov & Prob
	TCM Coal Project	East Kalimantan	30.7	Ind & Inf
Overseas & General Ltd (OGL)	Rahmat Project	East Kalimantan	-	-
	Jambi Project	Sumatra	-	-
Kangaroo Resources Ltd (KRL)	GPK Coal Project	East Kalimantan	248.0	Ind & Inf
	Mamahak Coking Coal Project	East Kalimantan	10.2	Meas, Ind & Inf

\*Measured, Indicated and Inferred

Source: Company announcements

**Table 5: Coal Quality of Indonesian Projects, ASX-listed Companies**

Project	Energy (kcal/kg)	Ash (%)	Sulphur (%)	Basis	Total Moisture (%)	Inherent Moisture (%)
Tabalong Coal Project	7,129	3.35%	0.88%	Air Dried	16.68%	8.23%
Pancaran Abadi Coal Project	5,095	7.36%	0.55%	Air Dried	44.56%	15.42%
PT Batubara Coal Project	4,334	-	-	Air Dried	-	-
Nadvara Thermal Coal Project	5,332	3.40%	0.24%	Air Dried	26.84%	17.30%
Nadvara Thermal Coal Project	5,331	3.66%	0.24%	Air Dried	25.95%	17.20%
TCM Coal Project	6,706	11.91%	1.80%	Air Dried	4.38%	5.35%
Rahmat Project	5,500	4.0%	0.3%	Air Dried	26%	15%
Jambi Project	6,627	16.00%	2.50%	Air Dried	9.70%	3.80%
GPK Coal Project	5,245	4.90%	0.18%	Air Dried	39.60%	-
Mamahak Coking Coal Project	7,526 - 7,570	-	-	Air Dried	-	-

Source: Company announcements

**ASX: OGL**

# The Indonesian Coal Industry

## Resources and Reserves

### Coal Resources

Most of Indonesia's coal resources are concentrated in the islands of Sumatra and Kalimantan. Generally speaking, the most extensive resources are found in Sumatra, while higher-quality resources are found in Central and East Kalimantan (see Table 6).

**Table 6: Indonesian Coal Resources (mt, end 2007)**

Location	Measured	Indicated	Inferred	Total
Sumatra	7,699	10,735	13,949	32,383
Java	2	0	7	9
Kalimantan	13,156	2,894	21,029	37,079
Sulawesi	53	33	147	233
Maluku	0	0	2	2
Papua	0	0	64	64
Total	20,910	13,662	35,198	69,770

Source: Directorate General Mineral, Coal and Geothermal Resources

**Table 7: Indonesian Coal Reserves (mt, end 2007)**

Location	Proven	Probable	Total
Sumatra	904.8	3,781.44	4,686.24
Kalimantan	4,556.99	2,605.99	7,162.98
Total	5,461.79	6,387.43	11,849.22

Source: Ministry of Energy and Mineral Resources and the New Energy and Industrial Technology Development Organisation, Japan

### Coal Quality

Indonesian coals are generally low in ash and sulphur, but high in moisture (see Table 8). According to Petromindo.Com<sup>1</sup>, the average sulphur content of commercially-produced Indonesian coal is less than 1%. As such, despite its high moisture content, Indonesian coal is often blended with other coals to reduce the sulphur content. As environmental standards for the production of electricity from coal become more stringent, this property of Indonesian coal has the potential to make it more valuable.

1. Petromindo.Com, Indonesian Coal Book 2008/2009

**Table 8: Indonesian Coal Resources (mt), by Gross Calorific Value (GCV)**

GCV (kcal/kg)	Measured	Indicated	Inferred	Total	% of Total
Low (< 5,100)	5,750	3,652	6,579	15,981	23%
Medium (5,100-6,100)	10,867	9,041	22,104	42,013	60%
High (6,100-7,100)	3,870	963	6,031	10,864	16%
Very High (> 7,100)	423	6	483	912	1%

Source: Directorate General Mineral, Coal and Geothermal Resources

## Domestic Demand/Consumption

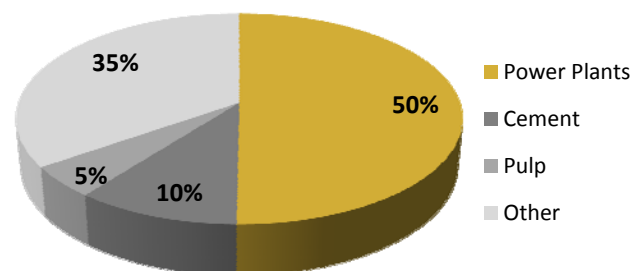
The domestic consumption of coal can be divided up into 3 broad categories: power generation, cement production and other industrial uses. Power plants make up by far the largest component of coal demand; accounting for over half in 2007 (see Figure 2). Power plants are followed by the cement industry; coal is used to fuel high-temperature kilns in the production of cement.

2. Petromindo.Com, Indonesian Coal Book 2008/2009

### Coal Reserves

According to the recent *Joint Study on Evaluation of Coal Resources and Reserves in Indonesia*, by the Ministry of Energy and Mineral Resources and the New Energy and Industrial Technology Development Organisation (of Japan), Indonesia's coal reserves at the end of 2007 were ~11,800mt (see Table 7).

**Figure 2: Distribution of Indonesia's Coal Demand (2007)**



Source: Petromindo.Com, Indonesian Coal Book 2008/2009

# The Indonesian Coal Industry

## Electricity Generation

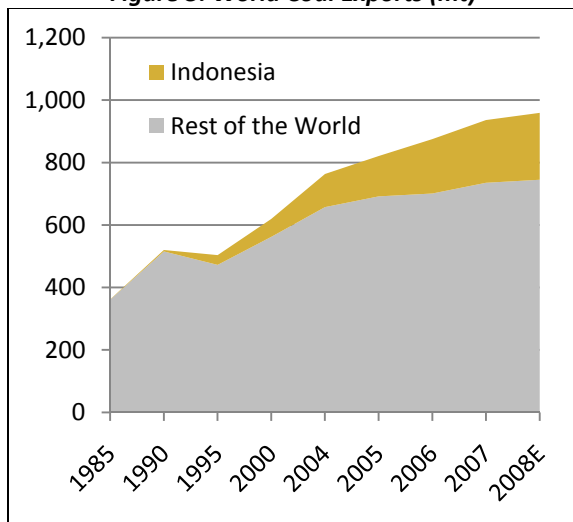
Indonesia produces a significant amount of its electricity from oil. The IEA<sub>1</sub> estimates that in 2007 30% of Indonesia's electricity was sourced from oil. This compares to 1% for China, 5% for India and a global average of 6% (IEA<sub>1</sub>). Electricity produced from oil is expensive, so the Indonesian government plans to convert 7,753 megawatts (MW) of diesel-fired power into coal power by building ~10,000MW of coal-fired power plants.

As of June 2008, PT PLN, the state-owned utility, had signed agreements for the construction of 29 coal-fired power plants with a total capacity of 8,718MW. 9 of these plants are currently under construction and expected to start operating during 2009 and 2010. PT PLN has also signed Power Purchase Agreements with several power companies to build a total of 886MW in coal electricity-generating capacity.

## Indonesian Coal Production

From producing next to no coal in 1985, Indonesia has emerged as a major international coal producer in less than 30 years (see Figure 3). In 2008 Indonesia accounted for over 4% both world hard and brown coal production (IEA<sub>3</sub>). As illustrated by Figure 4, this growth in production is highly export-driven, with ~75% of the hard and brown coal produced in 2008 exported (IEA<sub>3</sub>).

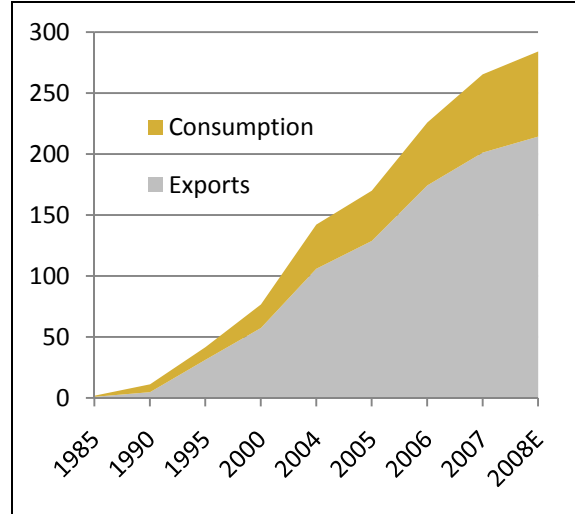
Figure 3: World Coal Exports (mt)



Source: International Energy Agency (IEA), Coal Information 2009

1. International Energy Agency (IEA), Key World Energy Statistics, 2009
2. Petromindo.Com, Indonesian Coal Book 2008/2009
3. International Energy Agency (IEA), Coal Information, 2009

Figure 4: Indonesian Coal Consumption & Exports (mt)



Source: International Energy Agency (IEA), Coal Information 2009

## Indonesia's Coal Producers

The production of coal in Indonesia is highly-concentrated, with the top 5 producers accounting for ~46% of total coal production in 2007 (See Table 9). Outside the top 5, however, the industry is highly fragmented, with the top 6-10 producers accounting for an average of only 2.5% (Petromindo.Com<sub>2</sub>).

Table 9: Indonesia's Top 5 Coal Producers

Company	Output (mt)	% Total
Kaltim Prima Coal, PT	38.4	14.5%
Adaro Indonesia, PT	36.1	13.6%
Kidenco Jaya Agung, PT	20.5	7.7%
Arutmin Indonesia, PT	15.3	5.8%
Berau Coal, PT	11.8	4.5%
Total Top 5 Producers	122.1	46.1%

Source: Petromindo.Com, Indonesian Coal Book 2008/2009

## Exporting Coal from Indonesia

As discussed earlier, the Indonesian coal industry is highly dependent on the world coal market, with ~75% of its coal production exported in 2008 (IEA<sub>3</sub>). After Australia, Indonesia is the second-largest coal exporter in the world (see Table 10). In 2005 Indonesia surpassed Australia, becoming the world's largest exporter of thermal coal.

Table 10: Top 5 Hard Coal Exporters (mt)

	2006	2007	2008E	% Total*
Australia	231.3	243.6	252.2	26.9%
Indonesia	171.4	197	202.6	21.6%
Russia	91.4	98.1	101.3	10.8%
Colombia	62	64.6	73.9	7.9%
United States	44.9	53.4	73.7	7.9%

Source: International Energy Agency, Coal Information 2009

\*Percentage of 2008E total world exports

## Exporting Coal from Indonesia, continued

Due to its location, Indonesia is in a strong position to take advantage of growing energy demand from Asia. Indonesia is at a transportation cost advantage over many other coal exporters (including Australia and South Africa). But Indonesia's higher-rank coal reserves are being preferentially depleted, so coal produced in the future will most-likely be lower-rank (in terms of calorific value). This will reduce this cost advantage, as it costs more (per unit of energy) to transport coal with a high moisture content and a resultant low calorific value.

## Coal Transportation

Most coal miners in Indonesian use a system of trucks and barges to get their coal to the end user, or to an export terminal (see Table 11). This provides for a cheap and flexible coal transportation system, which gives Indonesian coal miners a transport cost advantage over many other countries. Barging coal also allows for a fast expansion in production, as barging does not present the same capacity constraints as transporting coal via rail (as in China and Australia).

**Table 11: Coal Transportation for Indonesia's Largest Coal Producers**

Company	Mine to Barge	Method	Barge to Ship, or	
			Trans-shipment Facility	Method
KPC	13 km	Overland conveyor	-	Overland conveyor
Adaro	79 km	Truck	250-450 km	Barge
Kideco	39 km	Truck	58 km	Barge
Arutmin	7-18 km	Truck	124-199 km	Barge
Berau	13 km	Truck	74 km	Barge
Indominco	35 km	Truck	0-9 km	Overland conveyor

Source: Coaltrans Asia Presentation

## Indonesian Mining Legislation

On 16<sup>th</sup> December 2008 the Indonesian Parliament passed the Bill on containing Indonesia's new Law on Mineral and Coal Mining (the 'Law'). This Law, which has been under deliberation for well in excess of 3 years, represents a major regulatory development and the biggest change in the mining regulatory framework in more than 40 years. The Contract of Work (or PKP2B) system will no longer be available under this new Law, which is seen as a disappointment for many investors.

The Contract of Work system provided investors (resource companies) with the necessary approvals to conduct mining activities for the full life-of-mine; from exploration through to development and production. Under the Law, investors (resource companies) will need to apply for separate exploration and production licences; which is similar to the process in Australia. This is seen by many investors to add an extra layer of risk and many deter them from entering into large-scale projects.

Instead of the Contract of Work system, both domestic and foreign investors will be able to apply for a form of mining licence: an *Izin Usaha Pertambangan*, or IUP. The Law allows IUPs to be held by Indonesian legal entities, which, by all indications, can be wholly-owned by foreign investors. The Law does, however, require disinvestment of foreign interests within 5 years of production commencing.

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## Recommendation Structure

**Speculative Buy:** Expect >30% total return on a 12 month view but carries significantly higher risk than its sector

**Buy:** Expect >15% total return on a 12 month view

**Accumulate:** Expect a total return of between 0% and 15% on a 12 month view

**Reduce:** Expect a total return of between -15% and 0% on a 12 month view

**Sell:** Expect a total return of <-15% on a 12 month view

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**Cautionary note:** Our Investment Outlook and Investment Risk ratings are designed to compare companies within the resource and energy sector. Investment in resource and energy companies is inherently risky since the sector is highly cyclical.

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