AUSTRALIA

RES AU	Outperform
Price 15 Nov 11	A$0.47

Volatility index		
12-month target	**A$**	**0.75**
12-month TSR	**%**	**+59.6**
Valuation	**A$**	**0.66**
- DCF (WACC 13.9%, beta 1.3, ERP 6.0%, RFR 8.0%)		
GICS sector		**Energy**
Market cap	**A$m**	**124**
30-day avg turnover	**A$m**	**0.1**
Number shares on issue	**m**	**262.9**

Investment fundamentals

Year end 30 Jun		2011A	2012E	2013E	2014E
Revenue	m	0.0	0.0	0.0	0.0
EBIT	m	-6.3	-3.7	-5.4	-5.5
Reported profit	m	-5.1	-1.7	-2.7	-8.1
Adjusted profit	m	-5.1	-1.7	-2.7	-8.1
Gross cashflow	m	-5.0	-2.4	-3.6	-11.0
CFPS	¢	-2.3	-0.9	-1.4	-4.3
CFPS growth	%	-10.4	60.1	-53.5	-203.5
EPS adj	¢	-2.3	-0.7	-1.0	-3.1
EPS adj growth	%	-9.7	71.1	-53.5	-203.5
Total DPS	¢	0.0	0.0	0.0	0.0
Total div yield	%	0.0	0.0	0.0	0.0
ROA	%	-5.4	-2.7	-2.3	-1.0
ROE	%	-4.6	-1.3	-2.0	-6.5
EV/EBITDA	x	-12.5	-25.9	-18.0	-17.6
Net debt/equity	%	-18.2	-14.5	145.4	501.6
P/BV	x	0.8	0.9	0.9	1.0

Source: FactSet, Macquarie Research, November 2011
(all figures in AUD unless noted)

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16 November 2011
Macquarie First South Securities (Pty) Ltd

Resource Generation

Not just about the coal

A South African coal explorer…

We initiate coverage on Resource Generation (ResGen), an Australia and JSE listed coal exploration and development company, with an Outperform recommendation and a 12-month target price of A$0.75 (R6.00)/share. ResGen has a significant thermal coal resource of 3.1bn tonnes in South Africa's Waterberg coalfield from which it is focusing on the development of the Boikarabelo project.

…with big plans…

- Boikarabelo is targeting saleable production of ~15mtpa in two stages by 2020, split evenly between export and domestic thermal coal. The operation constitutes a shallow open pit mine which is relatively low cost as a result.
- Based on conservative assumptions and risk adjusting the NPV of Stage 1 and 2 by 25% and 50% respectively, we still value the project at A$146m.
- The company has secured export off-take agreements for its coal with Indian companies Integrated Coal Mining Limited (a 7% shareholder in ResGen) and Bhushan Steel for 2.5mt of export coal of Stage 1 and 4.5mt of Stage 2 production.

…but with considerable infrastructure-related risks

- The biggest risk to the ResGen investment case, in our view, is that the Boikarabelo project fails to secure sufficient and timeous access to rail facilities to export coal via Maputo, Richards Bay and/or Durban as well as to supply Eskom's Mpumalanga power stations. ResGen are, however, making progress on this front and recently signed a Memorandum of Understanding (MoU) with Transnet Freight Rail (TFR).
- In addition, while ResGen has contracts in place for export thermal coal, securing a customer (ie. Eskom) for the domestic thermal coal for both Stage 1 and 2 is crucial.
- In order to raise the necessary project finance for Boikarabelo, ResGen needs to secure both a definitive rail haulage contract with TFR and a coal supply agreement with Eskom. Any delay in meeting these conditions "precedent" would delay the development of the project.

Catalysts

While we believe that we have been sufficiently conservative in our modelling and have further risk adjusted our valuation there is still upside from the current share price. We acknowledge, however, that realisation of this upside depends on the company making progress on:

⇒ Conclusion of a rail haulage contract with TFR, and

⇒ Securing a domestic supply agreement with Eskom.

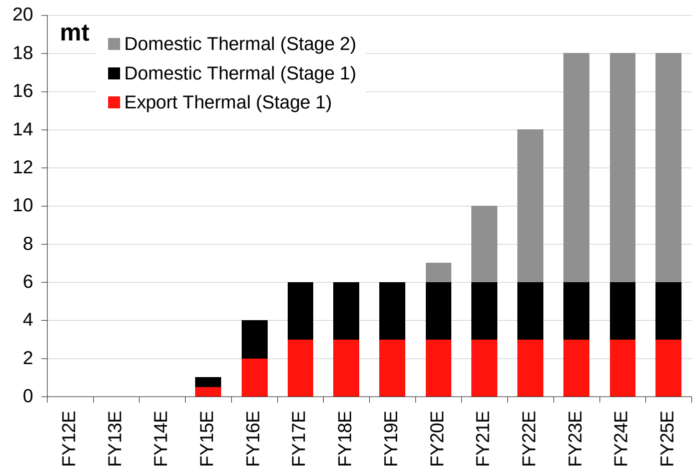
Both of these are the subject of ongoing work by the various parties involved and could take some time to conclude.

Inside

Company profile

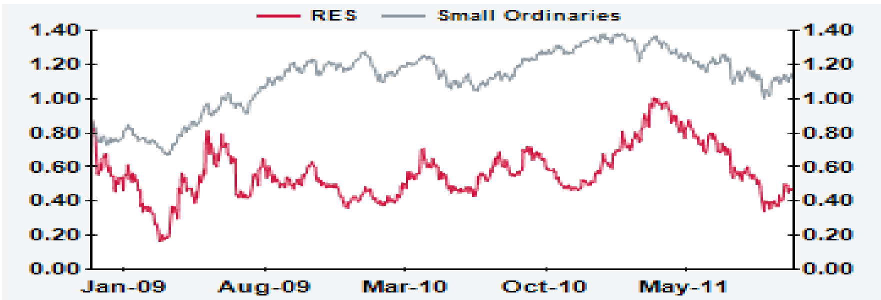
- ResGen is an Australian coal exploration and development company with significant thermal coal resources in South Africa's Waterberg coalfield. In addition it holds the rights to various prospective uranium tenements in Cameroon.
- The company, which is listed on the ASX (RES) and the JSE (RSG), was until September 2008 named Comdek Limited and was involved in the telecommunications industry.
- ResGen's key asset in South Africa is the Boikarabelo thermal coal project which is targeting ~15mtpa of saleable coal production, split evenly between the export and domestic power generation markets. The company expects production to start in 2014.
- ResGen has secured an off-take contract with a key shareholder, Integrated Coal Mining Limited (an associate company of Calcutta Electric Supply Corporation India (CESC)). The off-take makes provision for 1mtpa of coal for the first three years of production, increasing to 2mtpa for a further 35 years.

Fig 1 Plans to be become a sizable coal producer – Macquarie forecast



Source: Company data, Macquarie Research, November 2011

Fig 2 RES AU vs Small Ordinaries



Source: FactSet, Macquarie Research, November 2011

(all figures in AUD unless noted)

Not just about the coal

In our opinion, ResGen offers attractive returns from current levels. It has a sizeable, shallow, coal resource in an established, but developing, coal producing area and has already secured long-term strategic customers for its product. Our key concern is around the infrastructure development required to support the project - power, water and rail.

Investment Positives

Valuation looks attractive – Based on conservative assumptions and significant discounts to NPV for both stages of the Boikarabelo project, we value ResGen at A$170m or A$0.66/share. The resultant 12m forward target price of A$0.75/share offers 60% upside to the current A$0.47 share price. Additionally, the stock is trading at a EV/Resource t of 0.5 – cheaper than most peers and 5% below its closest comparator Firestone Energy.

Large, shallow, resource allowing for low cost opencast mining – ResGen has 3.1bn tonnes of coal resources in a ~120m multi-zone seam under only 20m of overburden in the Waterberg coalfield. The resource allows for low cost open pit mining in an area where Exxaro (EXX SJ, R180.98, Neutral, TP: R190.00) has been mining the same “seam” since 1980.

Mining right obtained and other approvals in process – The company has already been awarded a mining right for the Boikarabelo project and owns the surface rights over the planned mining area. An initial EIA (Environmental Impact Assessment) has been approved as part of the mining rights approval process and an IWUL (Integrated Water Use Licence) application for Stage 1 has been submitted.

Off-take agreements in place for export coal – ResGen has agreements in place with ICML (a 7% shareholder in ResGen) and Bhushan Steel for the majority of the export coal produced in Stage 1 and Stage 2 of the Boikarabelo project to be shipped to the respective companies’ operations in India. The company is in discussions with Eskom to secure an off-take agreement for domestic thermal coal.

A MoU in place with TFR for rail capacity – Access to rail capacity for export and domestic coal sales is fundamental to the ResGen business case and, while in continual discussions with TFR, the company now has an MoU in place, with TFR, which covers the Stage 1 volume of the project.

Fully black empowered – BEE (Black Economic Empowerment) legislation requires that all mining assets are 26% black-owned by 2014 and both of ResGen’s South African JV’s have met this criterion - Ledjadja at 26% black-owned and Waterberg One 30%.

Investment Risks

Insufficient rail capacity - The biggest risk to the ResGen investment case is that the Boikarabelo project does not get sufficient and timely enough access to rail facilities to export coal via Maputo, Richards Bay and/or Durban as well as to supply Eskom’s Mpumalanga power stations. While ResGen has an MoU in place with TFR, the requisite coal railing capacity is not currently in place and thus TFR/Transnet need to make a significant capital investment to resolve this. While we believe that there is a firm intention to put the capacity in place it is likely to take some time.

Domestic off-take contracts are key – While ResGen has contracts in place for export thermal coal (nice to have but a lot can change between now and first coal) securing a customer for the domestic thermal coal for Stage 1 of Boikarabelo (3mtpa) is crucial. In addition, Stage 2, although relatively low cost to develop, is wholly dependent on supplying a significant volume (12mtpa) of coal to a local power station customer (Eskom or IPP).

Project delays are thus a realistic risk – While we only model first coal from Boikarabelo in FY15E, and this is a full three years hence, ResGen’s ability to raise project financing for the project is conditional upon securing a definitive rail haulage contract with TFR and a coal supply agreement with Eskom. Any delay in meeting these conditions would not only delay the flow of funds and hence the development of the project but could also result in upward revisions in the project capex.

What is Resource Generation?

ResGen is an Australian coal exploration and development company with significant thermal coal resources in South Africa's Waterberg coalfield. In addition it holds the rights to various prospective uranium tenements in Cameroon.

The company, which is listed on the ASX (RES) and the JSE (RSG), was until September 2008 named Comdek Limited and was involved in the telecommunications industry.

The company has a fairly broad shareholder base with major shareholdings being:

⇒ Integrated Coal Mining Limited (ICML) and its associate Bantal Singapore Pte Ltd (12%) – ICML is also ResGen's biggest off-take customer,

⇒ Scodella Inc & Associates (7%),

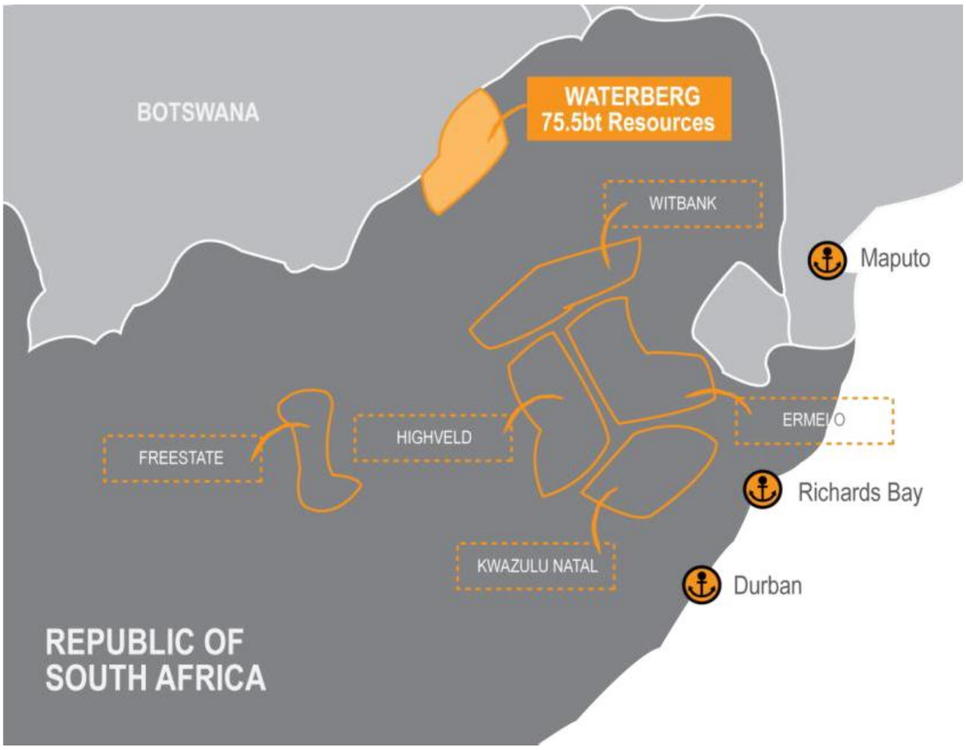
⇒ Commonwealth Bank of Australia and its subsidiaries (6%), and

⇒ Paul Jury, Managing Director of ResGen (6%).

Focussed on the Waterberg

ResGen has various coal exploration tenements within the significant Waterberg coalfield in South Africa's Limpopo province which together contain a currently defined resource of 3.1bn tonnes and are suitable for the production of an export thermal coal and a domestic power generation coal.

Fig 3 The Waterberg coalfield reportedly has 75.5bn tonnes of coal resources



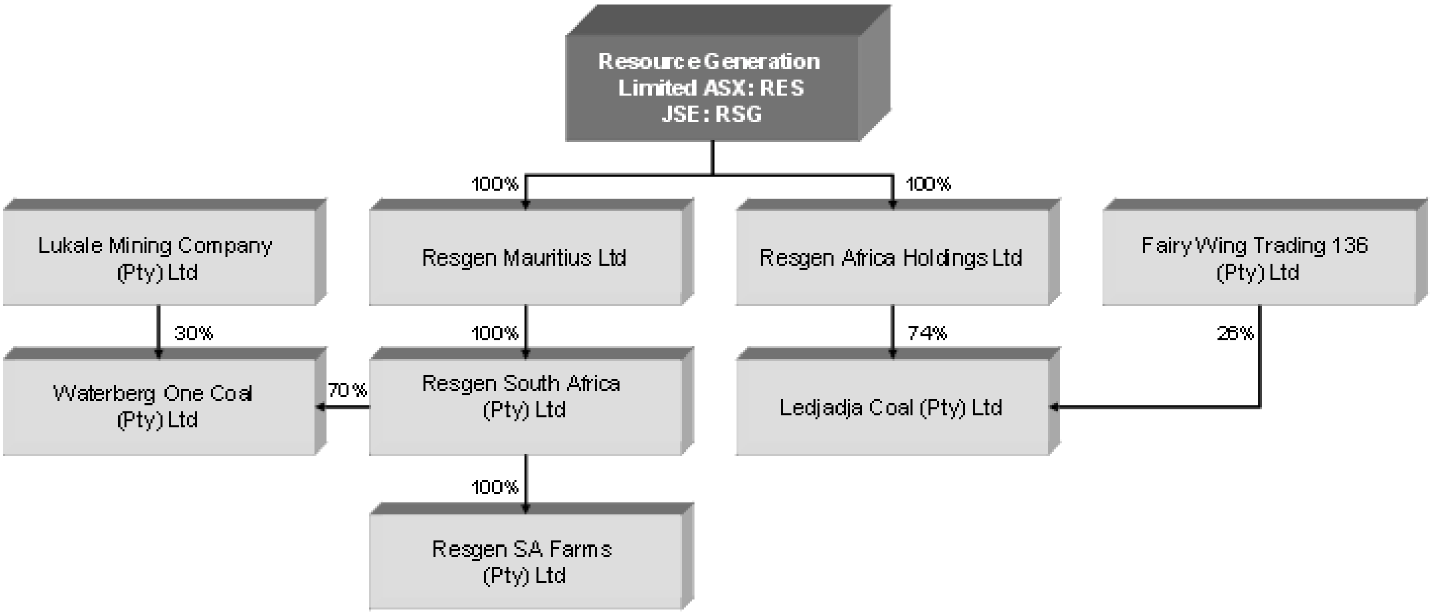
Source: Company data, November 2011

ResGen's tenements are held in two joint ventures (JVs):

⇒ **Ledjadja Coal** - in which the company has a 74% interest, with the remaining 26% held by its BEE partner Fairy Wing Trading 136 (Pty) Ltd, and

⇒ **Waterberg One Coal** – in which the company has a 70% interest with the balance held by BEE partner Lukale Mining Company.

Fig 4 Corporate structure



Source: Company data, November 2011

Uranium assets are not core

In addition to the coal deposits in South Africa, ResGen has an 80% interest in Uranex SA, a company incorporated in Cameroon, which holds the rights to 3 prospective uranium tenements in Cameroon. Very little exploration work has been done on these prospects to date and very little is planned.

Key personnel

Brian Warner - Chairman - Warner was appointed as the Non-Executive Chairman in October 2010. He is a metallurgist by trade and spent the last 20 years in mining research with various international merchant banking groups before retiring as the Senior Resources Analyst at Citibank, a position he held for 6 years.

Paul Jury - Managing Director - Jury has been MD of the company since July 2008. He has spent the last 25 years in the coal business having previously been CFO of Rio Tinto subsidiary Coal & Allied Industries (CNA AU, restricted), Finance Director at Coal Mines Australia Limited (a BHPB subsidiary), Executive Chairman at Oceanic Coal Australia and Managing Director at Resource Pacific which was sold to Xstrata (XTA LN, £10.03, Outperform, TP: £16.00) for A$1.08bn in 2008.

Stephen Matthews - Finance Director - Matthews has over 25 years experience in corporate finance and commercial experience. He was previously a senior executive at Coal Mines Australia Limited, Billiton Coal Australia, BHPB's Hunter Valley Coal division and Resource Pacific.

Toby Rose - Non-Executive Director - Rose is a geologist and has over 45 years' experience in the New South Wales coal and minerals industry. His previous positions include being Director General of the New South Wales Department of Mineral Resources and various directorships at Coal Mines Australia Ltd., Billiton Coal Australia and Resource Pacific.

Hendrik van den Aardweg - General Manager Operations South Africa – Van Aardweg is a qualified Electrical Engineer with extensive experience in gold, coal, platinum and antimony mining. He previously worked for Total Coal.

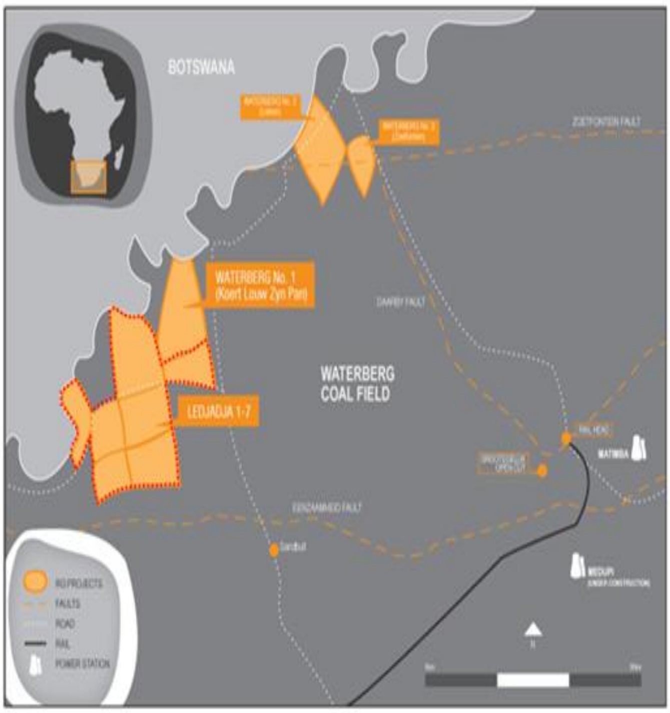
Development plans

ResGen's tenements are located in the western part of the Waterberg coalfield bordering the Botswana border.

The only operating mine in the whole Waterberg coalfield is the 18mtpa Grootegeluk operation which is owned by Exxaro (EXX SJ, R180.98, Neutral, TP: R190.00) and has been operating since 1980 and supplies 16mtpa to Eskom's Matimba Power Station (PS), 2mtpa of coking coal to ArcelorMittal South Africa (ACL SJ, R66.67, Underperform, TP: R56.00) and some thermal coal to the local and export markets. Exxaro is currently expanding the Grootegeluk operation by 15mtpa to supply Eskom's new Medupi PS from 2013.

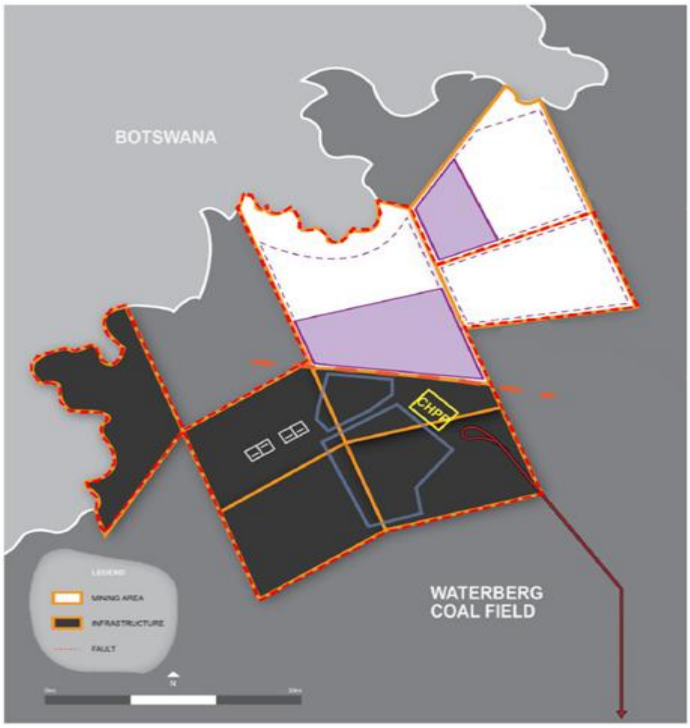
Grootegeluk is ~25km from ResGen's Boikarabelo Project and mines the same coal seams.

Fig 5 Waterberg No 1 is contiguous to Boikarabelo



*Note: The area highlighted in red represents the Boikarabelo project
Source: Company data, Macquarie Research, November 2011

Fig 6 Infrastructure covers most of the Ledjadja area



Source: Company data, Macquarie Research, November 2011

Boikarabelo is the key project

While the company has conducted exploration over a number of parts of its various tenements the key focus area is the Boikarabelo Project which is housed within the Ledjadja JV. The Waterberg No1 area, which is known as the Boikarabelo Extended Project, is contiguous to Ledjadja and is considered as a possible extension to Boikarabelo.

Having drilled 73 diamond-core holes and 120 percussion holes on the Boikarabelo and Waterberg No 1 property, ResGen has defined 3.1bn tonnes of gross in-situ coal resources, including probable reserves of 745mt.

Fig 7 Reserves and resources

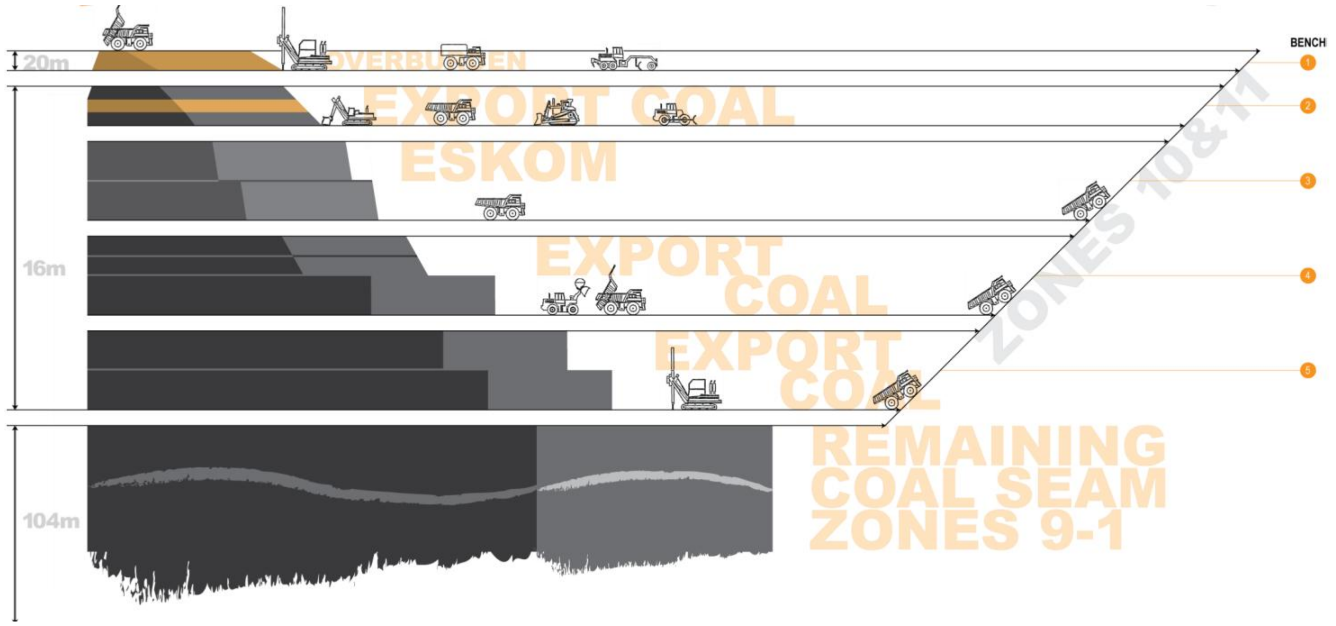
	Resources (mt)			Reserves (ROM mt)	
	Measured	**Indicated**	**Inferred**	**Probable**	**Proven**
Boikarabelo	664		1,480	431	
Waterberg No 1	426	552		314	
Total tonnage (mt)	**1,091**	**552**	**1,480**	**745**	**0**

Source: Company data, Macquarie Research, November 2011

Export and domestic thermal coal

The Waterberg coalfield typically contains 11 coal zones, numbered from 1 at the base to 11 at the top with overall “seam” thickness, including partings, ranging from 100-120m covered by ~20m of overburden.

Fig 8 Schematic of typical Waterberg coalfield geology, mining and coal products



Source: Company data, November 2011

While the upper coal zones (5 to 11), which have a combined thickness of ~60m, are of relatively lower quality and require beneficiation to produce an export quality thermal coal and a secondary lower quality power generation coal, the lower zones (1 to 4) of ~40m thickness require limited beneficiation to produce a power generation coal and zones 2 and 3 generally yield a small fraction (~10%) of semi-soft coking coal.

Fig 9 Thermal coal specifications

	Unit	Export thermal coal	Domestic thermal coal
Ash	%	14	29
Calorific value (NAR)	kcal/kg	5800	4400
Volatile	%	33	26
Sulphur	%	0.7	0.7
Total moisture	%	8.6	8.4
Inherent moisture	%	4.6	4.4

Source: Company data, Macquarie Research, November 2011

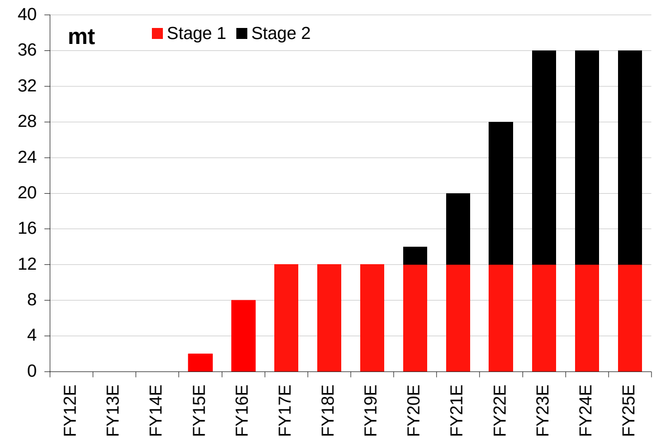
ResGen plans to focus primarily on producing export and domestic thermal coal from zones 10 and 11 over the first 3-5 years of production from Boikarabelo.

A two-stage plan for development

The project is expected to be developed in two stages:

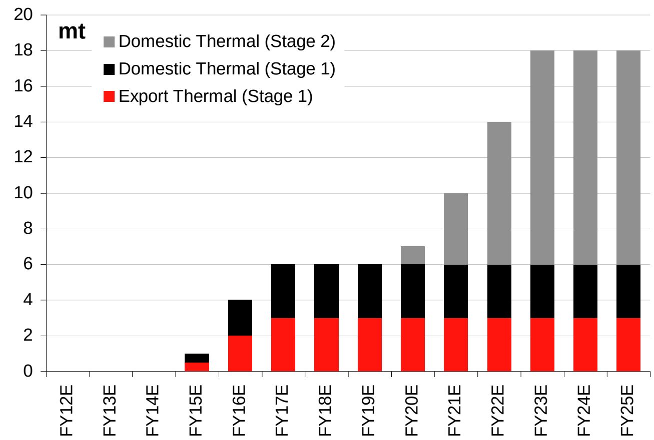
- **Stage 1** - will involve the establishment of the open-pit mining operation, as well as construction of a coal preparation plant, rail link and 40MW power station, with first production expected in 2014 (we assume 2015). The operation will produce 6mtpa of saleable thermal coal (50/50 export/domestic) from 12mtpa of ROM - ie. a 50% total yield.
- **Stage 2 -** is expected to follow ~5 years after Stage 1 and result in total saleable production increasing by 12mtpa, to 18mtpa. While there is the potential for an export thermal coal fraction from Stage 2 (availability of rail capacity to port is the key driver), we assume 100% of the incremental 12mtpa output to be thermal coal for the domestic power generation market. With incremental ROM of 24mtpa the Stage 2 yield will be 50%

Fig 10 Boikarabelo ROM production (mt) – Macquarie forecast



Source: Macquarie Research, November 2011

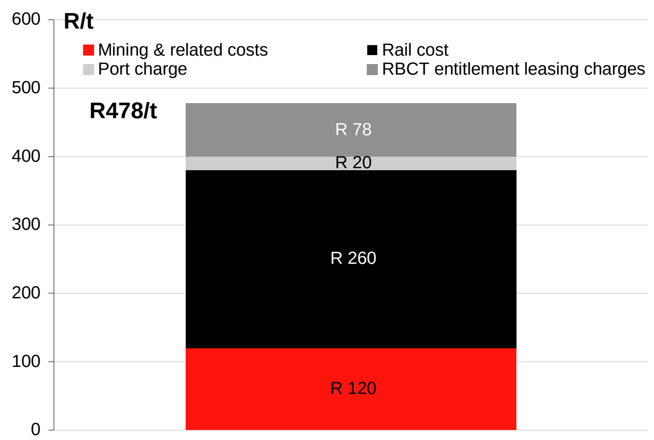
Fig 11 Boikarabelo saleable production (mt) – Macquarie forecast



Source: Macquarie Research, November 2011

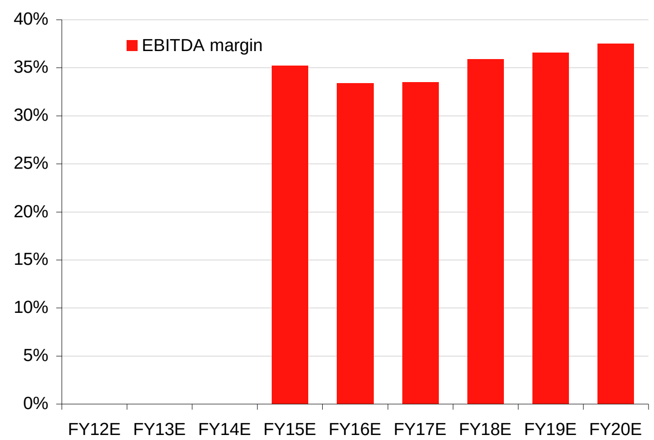
While we expect the FOR (free-on-rail), or at-mine, unit cost to be R120/saleable t the FOB (free-on-board) cash cost for the export thermal coal is likely to be significantly higher than this due to the high cost of rail/port access. We assume the coal is railed to the Richards Bay Coal Terminal (RBCT) and forecast rail costs of R260/t, port charges of R20/t and RBCT entitlement leasing charges of ~R80/t, resulting in a FOB cost of R480/t (US$60/t) in 2011 terms.

Fig 12 Logistics costs are significant



Source: Macquarie Research, November 2011

Fig 13 EBITDA margins

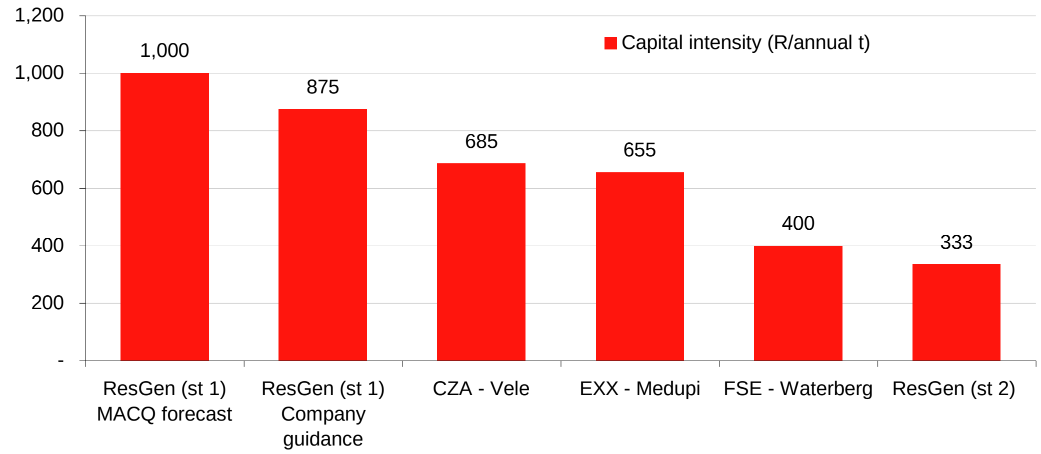


Source: Macquarie Research, November 2011

Capex intensity is 35% higher than Exxaro/Medupi

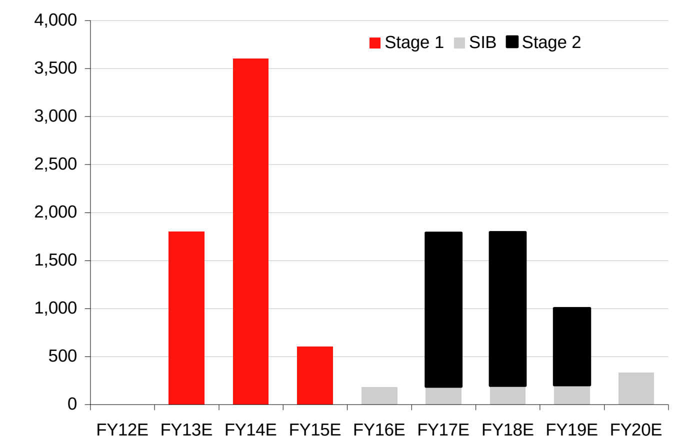
ResGen expects to spend ~R5.2bn (US$750m) on Boikarabelo Stage 1 - R2.08bn on the coal preparation plant, R832m on supporting infrastructure, R416m on a 36km rail link to the main TFR line and R676m on the 40MW power station. We model 15% higher capex for Stage 1 (R6bn) and R4bn for Stage 2.

Fig 14 ResGen's capital intensity looks reasonable (R/annual t)



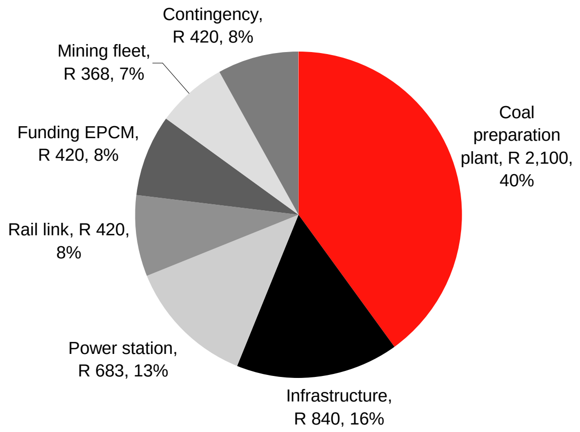
Source: Company data, Macquarie Research, November 2011

Fig 15 Capex profile (Rm) - Macquarie forecast



Source: Company data, Macquarie Research, November 2011

Fig 16 Capex breakdown (Rm)



Source: Company data, Macquarie Research, November 2011

Stage 1 is at a capital intensity of R1000/annual t of saleable product compared to R655/t for Exxaro's 14.6mtpa R9bn brownfield expansion at Grootegeluk for the Medupi PS and the R685/t Coal of Africa (CZA SJ, R6.55, Outperform, TP: R16.50) is spending on the Vele project.

At 30 September 2011 the company had a cash balance of A$24m (R192m) and plans to fund Boikarabelo Stage 1 through a mix of project finance (60%) and ResGen equity (40%) - to avoid unnecessary complexities around the pricing of an equity issue we have assumed the capex is fully debt funded.

While a number of institutions have provided the company with preliminary offers for the project financing, the funding is conditional on:

⇒ ResGen securing a rail haulage contract with TFR, and

⇒ ResGen agreeing a supply contract with Eskom.

Any delay in the meeting of these conditions will delay the flow of funds and hence the start-up of the mine.

Cornerstone off-take agreements in place - but only for exports

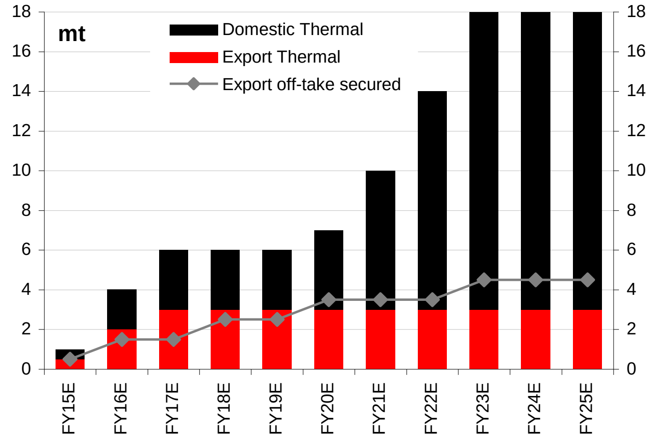
ResGen has secured off-take agreements for the majority of its forecast export coal production with two Indian buyers:

⇒ **Integrated Coal Mining Limited (ICML) -** part of India's RPG Group and a 7% shareholder in ResGen, has committed to take 139mt of export coal for delivery over a period of 38 years, split as follows:

  - Stage 1: 1mtpa for the first 3 years and 2mtpa for a further 35 years (73mt in total).
  - Stage 2: 1mtpa for the first 3 years and 2mtpa for a further 32 years (67mt in total). We, however, only model domestic power generation coal for stage 2.

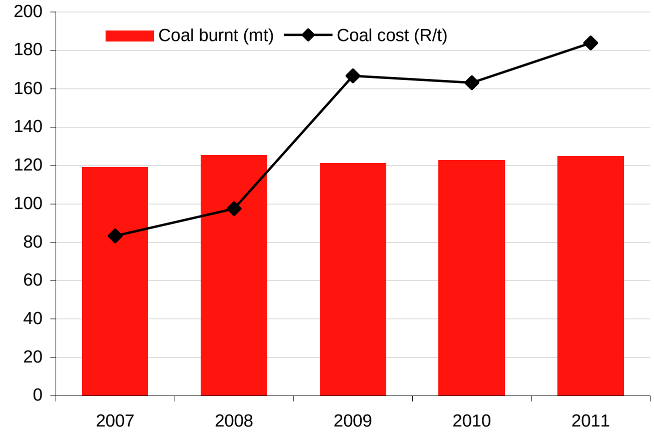
⇒ **Bhushan Steel** – this Indian steelmaker has committed to purchase 0.5mtpa of export coal for the first 5 years of the mine's operation and a minimum of 0.5mtpa for a further 15 years.

Fig 17 Export contracts in place



Source: Company data, Macquarie Research, November 2011

Fig 18 Eskom's coal now costing almost R200/t



Source: Department of Public Enterprises, Eskom, Macquarie Research, November 2011

The pricing of the export thermal coal will be linked to the international market prices at the time of shipment (eg. the Richards Bay API#4 price).

ResGen is focussed on securing a supply agreement with Eskom for the 3mtpa of domestic thermal coal to be produced from Stage 1. This coal would primarily have to be for Eskom's Mpumalanga PSs as Exxaro has long term contracts in place to supply Eskom's two Waterberg PSs - Matimba (operating) and Medupi (currently under construction). While the majority of Eskom's coal-fired PSs are located in Mpumalanga, and are largely supplied from dedicated mines in the Witbank/Highveld/Ermelo coalfields, the PS useful life is likely to extend beyond the lives of the current supplying mines and as a result Eskom will most likely have to source coal from the next big coal province - the Waterberg.

As a result Eskom is undertaking discussions with various potential coal suppliers from the Waterberg including with ResGen for Boikarabelo and indeed project financing for it is dependent on securing a domestic supply agreement of this nature with Eskom.

While up to recently Eskom has been paying an average of <R100/t for the ~ 125mtpa that it consumes, Eskom's increased requirements (which have to be covered under new more "commercial" contracts as opposed to cost-plus type contracts), the need for better/more consistent quality (which implies buying from bigger, more robust, suppliers), mining inflation, higher transport costs (coal is being road-hauled/railed significant distances) and competition with coal export economics, means that Eskom's coal cost has risen to close to R200/t. Indeed the latest big coal supply contract that Eskom has entered into is for 14.6mtpa of coal from Exxaro for the Medupi PS, and the coal price on this contract, being based, we believe, on a ~25% return on invested capital, is ~R250/t.

Apart from Eskom there are likely to be a number of Independent Power Producers (IPPs) emerging in the next few years which will also require coal supply and indeed CESC, also part of the RPG Group and the third largest Indian power utility, plans to undertake a feasibility study into constructing a 1320MW PS adjacent to ResGen's Boikarabelo mine. This could potentially secure a customer for a major portion of the domestic thermal coal from Stage 2.

Infrastructure is THE key risk

While ResGen has a good handle on its coal resource and project/mine planning, as well as having a contract in place for the export coal and being in discussions for off-take for its domestic coal, there are a number of infrastructure-related issues the resolution of which will determine when and exactly how ResGen will get Boikarabelo into operation.

The main risks are:

⇒ **Power** - electricity supply in SA is constrained and thus getting power for a new (and relatively remote) mining/coal washing operation is not easy.

⇒ **Water** - paradoxically, given its name, the Waterberg does not have an abundance of water and significant capex needs to be spent (public and private) on new water supply to support the many mining developments that are planned in the area.

⇒ **Rail/Port** - the Waterberg does not have adequate rail infrastructure/capacity to get coal either to the export market or to the Mpumalanga area to supply existing Eskom power stations.

Power - Trying not to be at the mercy of Eskom

While power for the construction of the Boikarabelo mine and plant will be sourced from the existing Eskom supply to the property, electricity for steady-state Stage 1 operations is planned to be sourced from a 40MW power station which ResGen plans to construct as part of Stage 1.

ResGen will be releasing tenders shortly for the construction and operation of the power station.

As mentioned earlier, CESC is investigating the feasibility of developing a 1320MW power station in the vicinity of Boikarabelo. This highlights CESC’s interest in bringing forward the development of Stage 2 and securing the additional export coal off-take. If there was no additional export coal to secure, CESC would probably not proceed with the development of the power station.

Water – Long-term plan underway

The beneficiation (washing) of coal requires significant volumes of water and thus, with the Waterberg being a water-scarce area, securing adequate water supply is a key element of the Boikarabelo project.

The greater Waterberg’s current water requirements are met by the Mokolo dam, on the Mokolo River, which supplies Exxaro’s Grootegeluk Mine, the Matimba PS and the town of Lephalale. According to the Department of Water Affairs (DWA), the Waterberg’s long term water supply will be met by the Mokolo and Crocodile River Water Augmentation Project (MCWAP) - MCWAP Phase 1 is expected to supply~30.5mm^3 pa with MCWAP Phase 2 adding an additional 110mm^3 pa. The DWA current planning, however, only allows for the confirmed requirements for the Matimba PS, the Medupi PS, the Grootegeluk Mine and the town of Lephalale and therefore focuses on development of MCWAP1 only.

While ResGen management is confident that underground (ie. borehole) water is sufficient to support the 2.9mm^{3}pa Stage 1 water requirement, and has based the initial IWUL (Integrated Water Use Licence) application thereon, the company’s long-term water solution involves the development of an effluent water treatment plant at Marapong, just outside Lephalale. This will supply sufficient water to meet Boikarabelo Stage 2 requirements and supply the Marapong community with additional water. A separate IWUL application is currently being developed for this project.

Rail – The ultimate lifeline

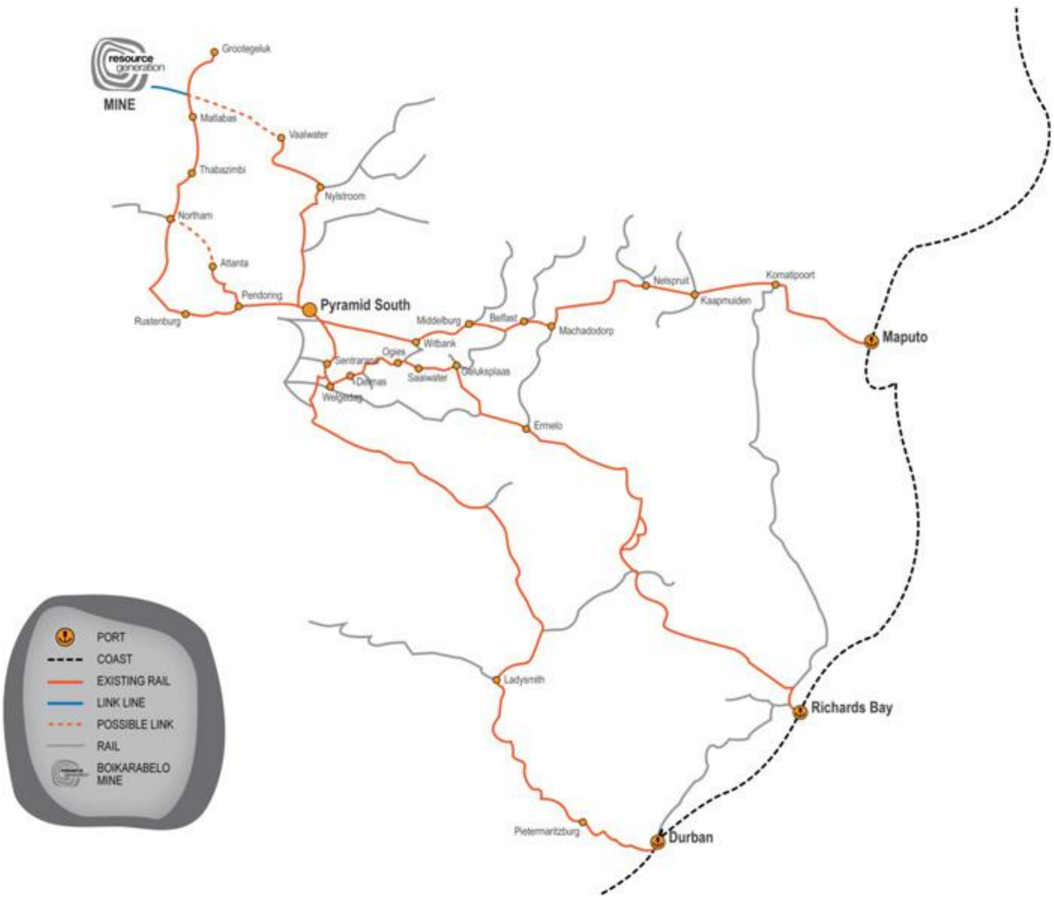
On current planning, all of ResGen's Stage 1 saleable production needs to be transported by rail transport to customers, with the export coal needing to reach one of the east coast ports (Maputo, Richards Bay and/or Durban) and the Eskom coal requiring transport into the Mpumalanga area.

Fundamentally, to initially plug-in to the Transnet Freight Rail (TFR) network, ResGen needs to build a 36km rail link from the Boikarabelo mine site to the rail line that runs from Lephalale (Grootegeluk). The company has budgeted R416m for this link and has already secured the various surface rights/servitudes on the land on which the link will be run. In time, ownership of the link will be transferred to TFR as a common user facility.

This, however, is the easy part.

While current capacity on the Lephalale line to the Pyramid South major railhead north of Pretoria – from which trains can be directed to Maputo for export, Richards Bay for export, Durban for export or Mpumalanga for Eskom supply – is, we believe, 4-5mtpa, only <1mtpa of coal is actually railed. One of the key constraints on the line is that it is not fully electrified and different segments of the line use different locomotives, the consequence being the changeover of locomotives (from diesel to AC to DC, etc) along various sections is highly inefficient. While capacity could be increased through additional loops, wagons and locomotives, the consistent electrification of the entire line is a pre-requisite to any significant increased railing capacity (eg. to support Stage 2 production levels).

Fig 19 Various rail routes to market – but investment needed



Source: Company data, November 2011

While there are a number of potential routes from Boikarabelo to Pyramid South, some of which require new rail links (ie. Matalbas/Vaalwater or Northam/Atlanta), the simultaneous upgrading of the line to be able to carry 26t/axle as opposed to the current 20t/axle would according to ResGen, result in capacity to rail 46mtpa from the Waterberg.

Transnet/TFR continue to make sweeping statements about improving the infrastructure from the Waterberg – and is apparently in the process of completing a Feasibility Study – but it is not yet clear when decisions will be made on this, how much it will cost and how the capacity will be funded. While TFR has noted that it is examining the possibility of a new heavy-haul line from the Waterberg, it seems the current plan is to increase capacity on the existing line, through phased upgrades, before investing in a completely new, heavy-haul line.

ResGen has, however, been having ongoing discussions with TFR and on 26 October 2011, the parties (actually the Ledjadja JV, on behalf of ResGen) signed an MoU which provides for ResGen to get 4mt of rail capacity for FY15E (July 2014-June 2015), 5mt for FY16E and 6mt for FY17E. The railed tonnage will be split 50/50 between coal railed to export ports and coal railed to Mpumalanga.

The haulage agreement is, however, subject to various conditions, the key ones of which are:

- ⇒ TFR completing its Waterberg Feasibility Study;
- ⇒ The completion of the requisite rail upgrades and rail links (all of which will be common- user);
- ⇒ Boikarabelo starting production; and
- ⇒ Formal allocation of capacity by TFR.

So, while the signing of the MoU is a step in the right direction, this is ONLY an MoU and we see sufficient rail capacity out of the Waterberg as being still far from being a *fait accompli*.

While it currently costs ~R115/t to rail coal from Mpumalanga to the RBCT, we estimate that rail from the Waterberg to RBCT will cost ~R260/t. In addition to port charges of R20/t, a non-RBCT shareholder such as ResGen would also have to lease export allocation at RBCT at about 10% of the export coal price (about US$10/t or R80/t at present). All-in exports via RBCT would therefore cost almost R360/t (US$45/t) in total rail/port costs in addition to the FOR cost at the mine.

Other export routes are of course possible, with Grindrod (GND SJ, R15.03, Outperform, TP: R16.30) investigating the expansion of its Matola (Maputo) terminal capacity from the current 6mtpa to 30mtpa and its Richards Bay dry bulk facility from 2mtpa to 10mtpa. It is unlikely, however, that total rail/port costs would be much different that the RBCT route.

Regulatory risks – Following due process

A number of cases in the past few years have highlighted the importance of making sure that all of the regulatory boxes are ticked prior to project development. Issues with prospecting/mining rights (ref. the Sishen debacle) and water use licences as well as environmental issues (ref. Coal of Africa's problems at Vele) have been brought to the fore.

Black Economic Empowerment (BEE)

ResGen's Waterberg holdings are sufficiently empowered via the Fairy Wing Trading 136 26% holding in the Ledjadja JV and the Lukale Mining 30% holding in the Waterberg One JV. Fairy Wing Trading 136 is owned by a group of South African businessmen and women with strong commercial and government relationships, while the major shareholders in Lukale Mining are Umnotho weSizwe Group (30%), African Crest Resources (26%) and Crystal Ball Properties (26%).

There are no local communities in close proximity to the mine so there are limited broad-based empowerment opportunities.

Mining and Surface Rights

In April 2011 Ledjadja was awarded a 30-year mining right for Boikarabelo, which covers all the mining tenements held within Ledjadja, including the Witkopje, Draai Om, Kalkpan, Osorno, Zeekoevley, Vischpan and Kruishout properties. An appeal has been lodged against the award, but the objections raised are similar in nature to those lodged by the same parties during the initial consultation phase of the mining right application and management are therefore confident the mining right award will be confirmed.

ResGen holds the surface rights over all the properties on which mining will take place. In addition, the company has secured various surface rights and servitudes to ensure the most appropriate and efficient routing of the rail link.

Environmental Approvals

The mine's environmental impact assessment (EIA) process was undertaken in accordance with the terms of the Mineral and Petroleum Resources Development Act of 2002 (MPRDA) and the National Environmental Management Act (NEMA).

As part of the award of the Mining Right in April 2011, the project has had its Environmental Management Plan (EMP) approved by the DMR. In addition, and in accordance with the NEMA, Ledjadja submitted an application for construction of the mine and the rail link in January 2011. While the public consultation and administrative reviews were completed without major issues, minor changes to the rail link routing have required the completion of a revised EIA.

Management is confident that approval of the revised EIA will be forthcoming.

Water Use Licence

An IWUL from the DWA is required to lawfully conduct all water use and water disposal activities in and around the mine. As mentioned earlier, ResGen plans to use underground (borehole) water in Stage 1 and, on this basis, submitted its IWUL application in December 2010. The DWA is currently assessing the application.

An IWUL application is in the process of being prepared in respect of the development of an effluent water treatment scheme at Marapong to supply the mine for Stage 2 as well as supply the Marapong community.

Valuation & Recommendation

We initiate coverage on ResGen with an Outperform recommendation based on our 12-month (DCF-based) target price of A$0.75 (R6.00)/share. The stock thus offers ~60% upside from current levels.

Only valuing Boikarabelo

While ResGen has significant coal acreage beyond that being developed for Boikarabelo (ie. Waterberg One), we do not attribute any value to the Waterberg One tenements. The Waterberg No 1 property, contiguous to Boikarabelo, could potentially significantly increase the size of the Boikarabelo project. In addition, we place no value on the uranium tenements in Cameroon, given the absence of any significant exploration on these properties.

Some of our key assumptions in respect of Boikarabelo are listed in the table below.

Fig 20 Key assumptions on Boikarabelo

Parameter	Units	Stage 1	Stage 2
Timeline			
Initial production	FY	2015	2020
Full production	FY	2017	2023
Capital			
Capital cost	Rbn	6,000	4,000
Capital intensity	R/annual t	1,000	333
Funding		100% debt	100% Internal cash
Volumes			
ROM production	kt	12,000	24,000
Saleable production	kt	6,000	12,000
- Export thermal coal	kt	3,000	0
- Domestic thermal coal	kt	3,000	12,000
Operating costs			
FOR Mine / Eskom cost	R/t	120	120
Rail	R/t	260	260
Port	R/t	20	20
RBCT entitlement leasing charge	R/t	78	78
Total	R/t	478	478
Coal prices			
Long-term export thermal coal	US$/t	80	80
Long-term domestic thermal coal	R/t	250	250
Exchange rates			
Long-term R/US$		10.33	10.33
Long-term US$/A$		0.82	0.82

Source: Company data, Macquarie Research, November 2011

We calculate a weighted-average cost of capital (WACC) for ResGen of 13.9%, based on:

- ⇒ Risk-Free Rate = 8%;
- ⇒ Market Risk Premium = 6%
- ⇒ Beta = 1.3.
- ⇒ Thus **Cost of Equity** = 15.8%
- ⇒ Cost of Debt = 9.0%
- ⇒ Tax Rate = 28%
- ⇒ **Cost of Debt (after tax)** = 6.5%
- ⇒ Debt/Equity = 25%/75%
- ⇒ **WACC = 13.9%**

We model both stages of Boikarabelo explicitly to FY40E only and thus do not incorporate a terminal value.

On this basis, we get an NPV of A$114m for Stage 1 and A$122m for Stage 2. Applying the bull case for Stage 2 (including an export thermal coal fraction at a 15% yield) we get an NPV of A$233m.

Conservative assumptions but still risk adjusting NPVs

While we believe that we have used relatively conservative assumptions in reaching our valuations for Boikarabelo Stage 1 & 2 we acknowledge the significant risks inherent in this project particularly in terms of infrastructure.

As a result, we have discounted our Boikarabelo Stage 1 valuation by 25% to A$85m, and Stage 2 by 50% to A$61m. The key triggers for removing these discounts in due course will be more definitive commitments from both Eskom and TFR in respect of coal off-take and rail capacity, respectively.

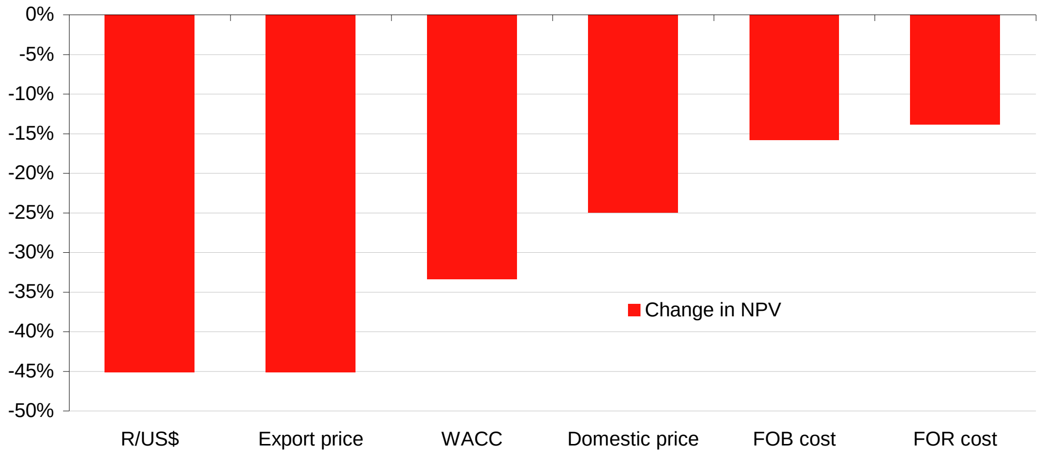
Fig 21 Valuation breakdown

	Units	Stage 1	Stage 2	Total
Total NPV	A$m	154	165	318
ResGen interest	%	74%	74%	74%
Attributable to ResGen	A$m	114	122	236
Risk adjustment	%	25%	50%	38%
Risk adjusted NPV	**A$m**	**85**	**61**	**146**
Net cash/(debt)	A$m			24
Equity value	**A$m**			**170**
Issued shares	m			258
Equity value	**A$/sh**			**0.66**

Source: Company data, Macquarie Research, November 2011

Valuation is most sensitive to changes in the export price received

Fig 22 % change in NPV based on 10% change in assumptions



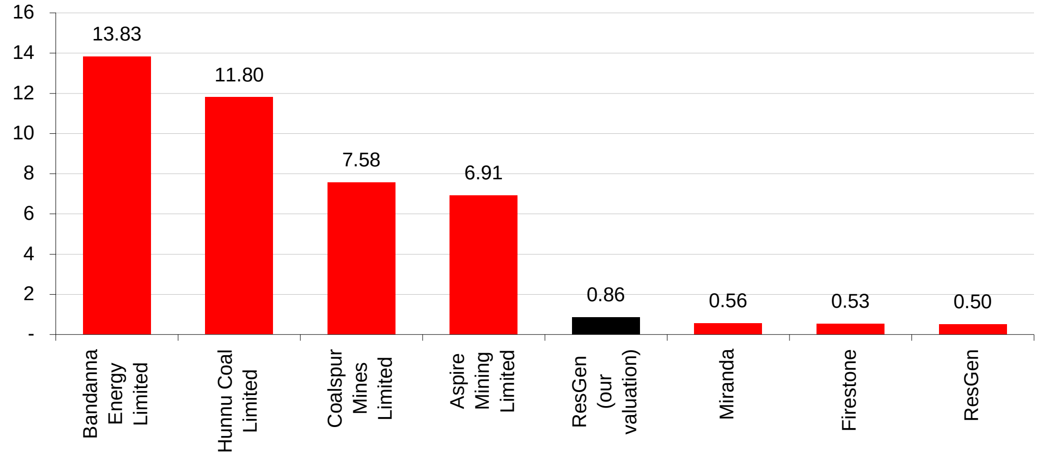
Source: Company data, Macquarie Research, November 2011

The valuation is particularly sensitive to changes in the price received for its export coal with changes in the R/US$ or the export price (eg. Richards Bay API#4 price) having the greatest impact on value. This is due to the export coal production being significantly more profitable than the domestic thermal coal. The valuation is less sensitive to changes in costing due to the low mining cost associated with the project.

ResGen looks cheap compared to peers

When we compare ResGen's EV/Resource t to a group of listed Australian and South Africa coal exploration companies, ResGen appears to be the cheapest at R0.50/Resource t.

Fig 23 Peer explorer comparison (EV/resource t) – R/t



Source: Company data, Macquarie Research, November 2011

ResGen's closest comparator is Firestone Energy in that it is at a similar stage of development in the Waterberg coalfield and is also listed in Australia, and ResGen is trading at a small discount to it.

Fig 24 Financials

Resource Generation (RES AU / RSG SJ)

Share price:	0.47
Target price:	0.75

Profit and loss		FY11A	FY12E	FY13E	FY14E	FY15E
Sales	A$m	0	0	0	0	62
Production costs	A$m	1	0	0	0	40
EBITDA	A$m	(1)	0	0	0	22
Depreciation and amortisation	A$m	0	0	0	0	22
Other income/(expenses)	A$m	(6)	(4)	(5)	(5)	(6)
EBIT	A$m	(6)	(4)	(5)	(5)	(6)
Net interest income/(expense)	A$m	1	0	0	(10)	(30)
Profit before tax	A$m	(5)	(3)	(5)	(15)	(36)
Taxation	A$m	0	1	1	4	10
Profit after tax	A$m	(5)	(2)	(4)	(11)	(26)
Non-controlling interests	A$m	0	(1)	(1)	(3)	(7)
Reported Net Profit	A$m	(5)	(2)	(3)	(8)	(19)
Profit growth	A$m	55%	-66%	54%	203%	133%
Effective tax rate	%	0%	28%	28%	28%	28%
EPS adjusted	A$c	(2)	(1)	(1)	(3)	(7)
EPS growth	%	10%	-71%	54%	203%	133%
DPS	A$c	0	0	0	0	0

Cash Flow		FY11A	FY12E	FY13E	FY14E	FY15E
Cash generated from operations	A$m	(2)	(2)	(2)	(2)	15
Net interest	A$m	1	0	0	(10)	(30)
Tax paid	A$m	(0)	(1)	(1)	(4)	(10)
Dividends paid	A$m	0	0	0	0	0
Operating cash flow	A$m	(2)	(2)	(3)	(16)	(24)
Capital expenditure	A$m	(9)	(1)	(201)	(385)	(66)
Investing cash flow	A$m	(385)	(66)	(19)	(170)	(142)
Debt drawdown/(repayment)	A$m	0	0	200	400	200
Equity financing & other	A$m	42	(2)	(2)	0	0
Financing cash flow	A$m	42	(2)	198	400	200
Net cash flow	A$m	20	(5)	(5)	(2)	109
Free cash flow	A$m	(12)	(4)	(204)	(402)	(91)

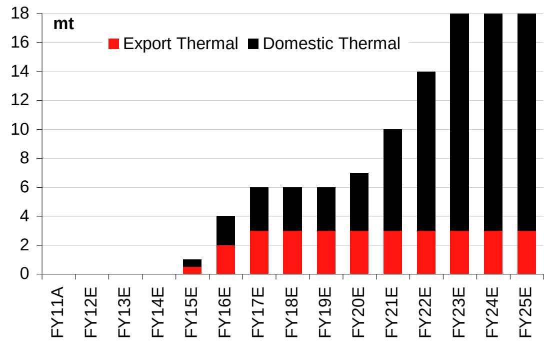
Balance Sheet		FY11A	FY12E	FY13E	FY14E	FY15E
Cash	A$m	25	20	15	13	123
Current assets	A$m	26	20	15	17	152
Fixed assets	A$m	102	105	306	691	735
Other assets	A$m	11	13	14	14	14
Total assets	A$m	140	138	334	722	901
Current liabilities	A$m	1	1	1	0	5
Total liabilities	A$m	5	6	206	605	810
Non-controlling interests	A$m	0	(1)	(2)	(4)	(11)
Shareholder equity	A$m	134	132	128	117	92
Total debt	A$m	1	1	201	601	801
Net debt/(cash)	A$m	(24)	(19)	186	588	678
Working capital	A$m	0	0	0	0	4
Average weighted shares	000's	216,510	257,896	257,896	257,896	257,896

Production		FY11A	FY12E	FY13E	FY14E	FY15E
Coal production						
Saleable production	mt	0.0	0.0	0.0	0.0	1.0
Export	mt	0.0	0.0	0.0	0.0	0.5
Eskom	mt	0.0	0.0	0.0	0.0	0.5

Key assumptions		FY11A	FY12E	FY13E	FY14E	FY15E
SA Richards Bay FOB	US$/t	108.28	120.63	106.88	93.50	90.75
ZAR/US$		7.03	7.41	8.37	8.89	9.28

Ratio analysis		FY11A	FY12E	FY13E	FY14E	FY15E
EBITDA margin	%	-4260%	N/A	N/A	N/A	35%
Operating margin	%	-41853%	N/A	N/A	N/A	-9%
Price Earnings	x	N/A	N/A	N/A	N/A	N/A
Dividend Yield	%	0%	0%	0%	0%	0%
EV/EBITDA	x	0	N/A	N/A	N/A	36
ROE	%	-4%	-1%	-2%	-7%	-21%
ROA	%	-4%	-1%	-1%	-1%	-2%
Gearing (debt/equity)	%	1%	1%	157%	513%	874%

Sensitivities					
Coal pricing					
	-10%	-5%	Base case	+5%	+10%
Valuation	0.66	0.66	0.66	0.66	0.66
Discount rate					
	11.9%	12.9%	Base case	14.9%	15.9%
Valuation	1.14	0.88	0.66	0.48	0.33



Source: Company data, Macquarie Research, November 2011

Appendix 1 – The Thermal Coal Market

Provided by Macquarie Commodity Analyst Hayden Atkins

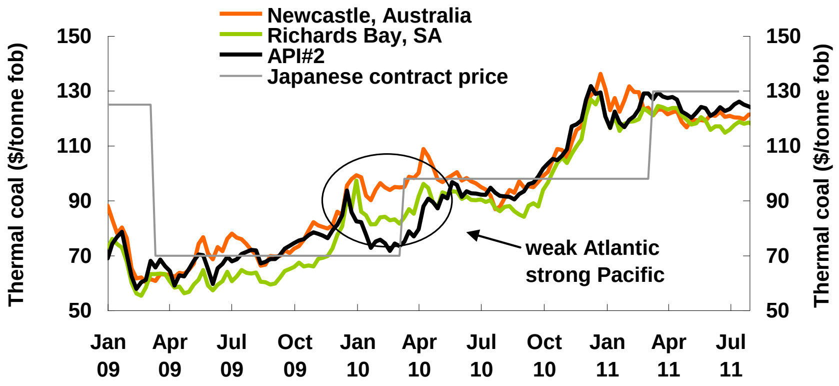
Good reasons for winter strength despite macro concerns

Thermal coal pricing has been very steady against broader macro turmoil. We were initially expecting some weakness in Q3, especially given index pricing wasn't competitive into China. But this doesn't seem to have mattered too much, with China managing to import its coal from Australian and Indonesia well below Newcastle benchmark prices. European prices also managed to hold their ground, given the good spreads offered in power markets on burning coal into the winter.

Chinese power supply issues should underpin a strong coal burn through winter

Turning into the end of the year, the market looks tight, despite the macroeconomic fears currently engulfing markets. The China market in particular looks like it will underpin strong prices for the rest of the market, given the tightness seen there. This isn't driven so much by strengthening power demand, which is likely to slow along with industrial production. Rather, the big issue is the large drop in hydro generation availability, which has fallen 20% YoY in August and is tracking at 2009 levels. This is putting a huge amount of pressure on coal burn, right when IPPs will be looking to build stock into the winter.

Fig 25 Pricing has been extremely steady; 1H10 provides the template for a weak Atlantic/strong Pacific market



Source: sxcoal, globalCOAL, Macquarie Research, November 2011

Demand in the rest of the world has much less room to fall than 2008/09

Demand in the rest of the world may be seen as more shaky, especially in Europe, which is the epicentre of global growth concerns. While we are not discounting the potential for further weakness in industrial activity and power demand, the loss of nuclear generation capacity in Germany and the unavailability of solar generation in winter means that coal demand is going to be stronger in that country heading into the end of the year. Stocks across the region in general are not particularly high, so it seems like there is a lot less room to move in the event of a recession than there was in 2008/09. A similar case can be made for Japan, where coal burn looks unable to fall, given the loss of nuclear capacity.

We also have a template for what the market will look like if European demand is weak and Pacific markets remain robust. This is precisely the situation in 1H10, where the difference between European pricing and Newcastle spot prices was huge (as shown in the chart above). The effect of this was to shift coal out of the Atlantic from suppliers in Colombia and South Africa into Pacific markets. This didn't undermine Pacific prices, which held strong through this period.

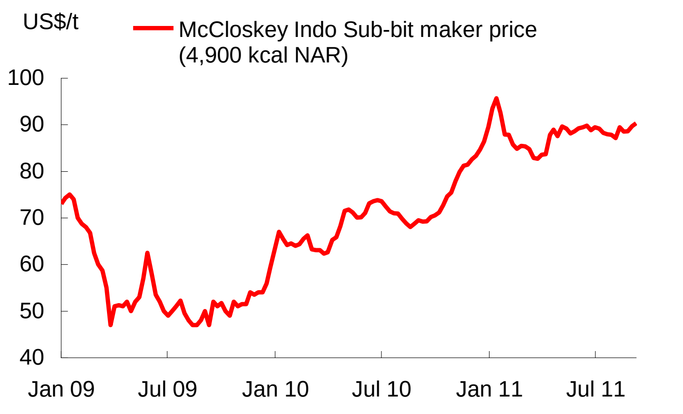
These factors should ensure that thermal coal remains very defensive in the current macro-driven uncertainty, particularly into the early stages of next year. To be sure, it seems that demand would have to take an incredibly drastic turn for the worse to undermine prices. While the risk of that is not zero, it seems unlikely that we will see the 2008 type of event that is needed to undermine the robust outlook for thermal coal.

Fig 26 Seaborne Thermal Coal Demand and Supply

Demand (mt)	**2007**	**2008**	**2009**	**2010F**	**2011F**	**2012F**	**2013F**	**2014F**	**2015F**	**2016F**
Atlantic	225	225	201	181	197	199	207	208	209	211
China	40	35	80	114	120	125	125	130	135	150
India	35	36	60	75	92	111	123	132	148	155
Other Pacific	306	316	312	343	348	364	387	406	418	427
Total Demand	**607**	**612**	**653**	**713**	**757**	**799**	**842**	**875**	**910**	**942**
% change	3.3%	0.9%	6.6%	9.2%	6.1%	5.6%	5.4%	4.0%	4.0%	3.5%
Supply (mt)										
Australia	112	126	139	141	143	163	184	202	216	245
Indonesia	195	200	233	284	310	326	338	356	377	392
China	45	36	18	14	14	14	14	14	14	14
South Africa	66	62	65	69	69	71	74	80	80	81
Russia	72	72	82	85	82	86	88	88	88	90
Colombia	65	69	63	70	77	81	84	88	99	109
Other	51	48	52	50	61	56	54	53	55	57
Total Supply	**607**	**612**	**653**	**713**	**755**	**797**	**836**	**880**	**929**	**988**
% change	3.3%	0.9%	6.6%	9.2%	6.0%	5.6%	4.8%	5.3%	5.5%	6.3%
Notional Balance	**-**	**-**	**-**	**-**	**-1**	**-1**	**-6**	**5**	**19**	**46**

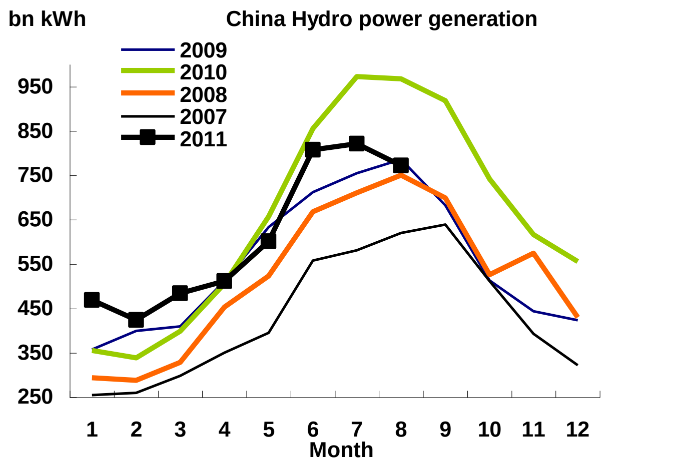
Source: GTIS, Macquarie Research, November 2011

Fig 27 Indonesian sub-bit prices are firming with increasing Chinese interest



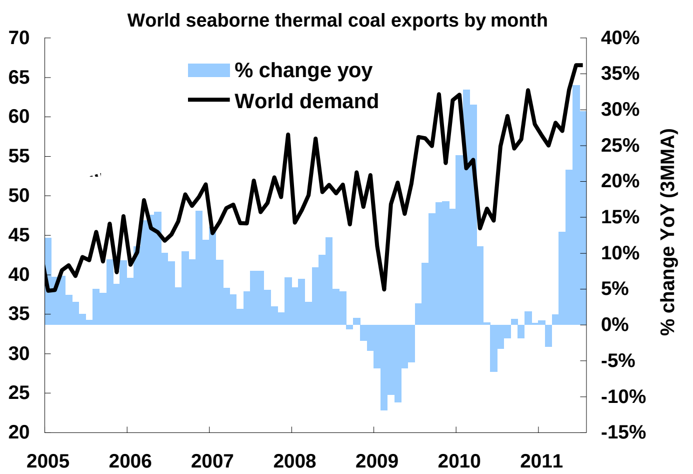
Source: GTIS, Macquarie Research, November 2011

Fig 28 Chinese hydro generation is falling away sharply



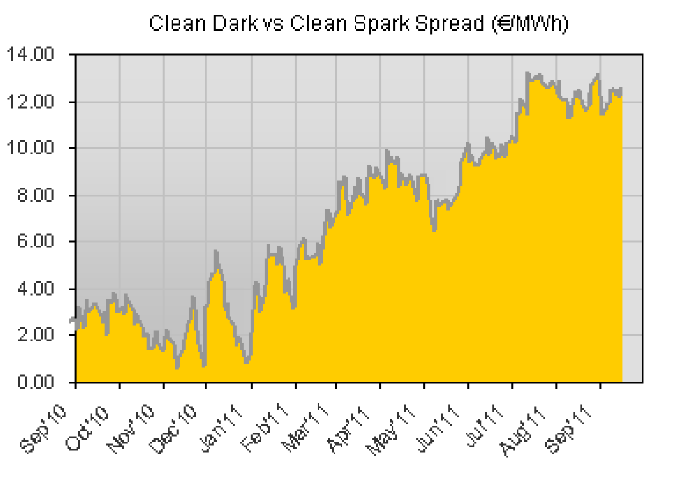
Source: globalCOAL, Macquarie Research, November 2011

Fig 29 Seaborne supply bounces back as Indo recovers from rains



Source: sxcoal, Macquarie Research, November 2011

Fig 30 Dark spreads on Cal'12 still look inviting for generators



Source: McCloskey, globalCOAL Macquarie Research, November 2011

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

Macquarie – Asia/Europe
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie First South - South Africa
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie - Canada
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie - USA
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Australian/NZ/Canada stocks only

Recommendations – 12 months
Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 September 2011

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	57.35%	65.88%	56.94%	46.54%	74.68%	47.85%	(for US coverage by MCUSA, 11.63% of stocks covered are investment banking clients)
Neutral	31.99%	20.68%	31.94%	50.00%	23.42%	34.66%	(for US coverage by MCUSA, 9.30% of stocks covered are investment banking clients)
Underperform	10.66%	13.45%	11.11%	3.46%	1.90%	17.49%	(for US coverage by MCUSA, 0.47% of stocks covered are investment banking clients)

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