

QRC STATE OF THE SECTOR

DECEMBER QUARTER 2015

IN THIS EDITION:

Feature: Every cent counts in the race to survive

Key indicators: QRC Production Index, QRC Value of Production Index and Price Outlook

QRC CEO **Sentiment** Index



By Michael Roche, Chief Executive Queensland Resources Council

Imagine yourself standing in the ocean and you are digging your toes into the sand, trying to keep your head above the water as each wave rolls past. That's how most veterans in our sector are feeling of late. It is no secret. Industry is hurting and survival is the name of the game.

In order to get a clear picture of one of the worst downturns in decades, we commissioned industry intelligence experts Wood Mackenzie to tell us where our coal, base metals and LNG producers sit on global industry cost curves and whether producers were earning enough to keep their heads above water (see Feature Article on pages 2 and 3). And the news is not good.

One-third of all our coal mines in Queensland are running at a loss – in other words they are not earning enough revenue to cover their cash costs. Breaking that down further, more than half of Queensland's thermal coal mines (producing coal for power generation) and one in four of our metallurgical coal mines (producing coal for steel making) are not covering their cash costs.

Our copper and zinc operations are gripping into the sand tightly with their toes, covering cash costs - but only just. And our LNG producers are having to deal with an unprecedented collapse in the oil price, to which LNG prices are linked.

While the cost curves and profitability analyses provide hard data on the state of our sector, the opinions of the industry leaders in Queensland – many of them veterans of thirty or more years – tell the story more starkly. I have met with a wide cross-section of them over the summer and here is how they summed up the business conditions they are facing right now:

"One of the most challenging times in the last 50 years" ... "Never seen it this bad" ... "Been in industry 28 years and this is the worst I've seen" ... "Many of us would be out on the street except for the exchange rate" ... "It's all about survival" "We are in uncharted territory" "It's as bleak as it's ever been".

Resource companies are doing everything they can to keep their heads above water but the sad truth is that we have lost 21,000 resource sector jobs in the past two years.

We need governments – federal, state and local - to play their part in providing the sector some relief.

Recently there was a lot of noise and political focus on job losses at the nickel refinery in Townsville. QRC stepped up to say that, while we supported those workers being looked after, it was important to remember that resource sector employment had fallen by more than 20,000 in the past two years. And while

SECTOR DOING ITS BEST TO KEEP ITS HEAD ABOVE WATER

the sector impressively still accounts for one in every six jobs, it is vital that governments broaden their focus to what they should be doing to protect as many as possible of the remaining 60,000 jobs in the resources sector in Queensland.

I am not going to try to sugar coat the situation. More resources jobs will be lost over the next few months. Our challenge though is to do what we can to preserve the maximum possible number of those jobs.

I am pleased to report that the Premier has agreed to a special meeting of her Cabinet Jobs Committee with a delegation from the Queensland Resources Council.

QRC will want to explore with the Premier and her Ministers a range of ways in which government can ease the burden of government-imposed or sanctioned costs.

We will want to talk with the cabinet committee, for example, about what can be done about some of the rampant increases in local government rates for many mining and gas operations.

While a commitment to no increase in royalties in this current parliament is welcome, in reality we need to be having a conversation about the fact that the state government is collecting royalties from resource operations which aren't even covering their cash costs.

Similarly, government and private sector service providers of rail, port, water and energy services need to be coming to the table to discuss how they could be working with their customers to get through this very difficult part of the cycle.

Government also has to seriously re-think proposals for additional regulation flowing from reviews of long distance commuting (FIFO) arrangements and of the mining industry safety and health legislation.

Finally, in these toughest of times for the resources sector, it is difficult to fathom why our state government would have introduced into the parliament in December legislation designed to bring to a premature end nearly 230 mining jobs on North Stradbroke Island and at the nearby processing plant. A similar number of job losses at a nickel refinery attracted the presence of the Premier and her entire Cabinet Jobs Committee, and yet her government plans to wipe out these jobs to appease a noisy few.

Also in this edition we report the results of our most recent CEO Sentiment Survey. Negative sentiment about the global macroeconomy is the overwhelming concern amongst our industry leaders, but this latest survey reveals that the concerted attacks on the industry's social licence to operate is running a close second.



EVERY CENT COUNTS IN THE RACE TO SURVIVE

While it is no news to anyone in the resources industry that times are very tough; new data commissioned by QRC shows that the circumstances facing almost all Queensland commodities are in fact dire. With most resource businesses purely focussed on survival, the short-term has become the new long-term.

The only real source of relief has been in exchange rate depreciation, but even here the Aussie dollar remains stubbornly high, and so inadequately buffering the global price falls in Australian dollar terms.

Queensland resource companies are telling us is that it is very much a case of every single cost saving, even just a few cents per tonne improvement, is making a difference to their survival prospects. Companies tell us they are bringing a forensic intensity to bear as they conduct a deep dive into all their costs.

To help governments and logistics providers understand just how challenging the circumstances are for all Queensland resources operations, QRC commissioned industry intelligence experts Wood MacKenzie to produce a set of global cost curves for key Queensland commodities.

A global cost curve refers to a graph of the production costs for all the mines or companies in that particular industry. This curve allows an individual mine to see how its production costs relate to its competitors. Cost curves are important in industries like resources where most producers receive the same or similar prices for their products.

Each of the curves below (continued on p3) focus on just cash costs. The prices presented are spot prices and not all production is sold at spot prices with many companies negotiating medium term contract prices and hedging some of their price risk.

Regardless, the stark message from this analysis is that there are many Queensland operations for whom their revenues fall below their cash costs of production. That situation, in effect burning cash, is not sustainable for very long.

FIGURE 1: QUEENSLAND COPPER MINES

While copper prices have fallen sharply, the five Queensland operations (marked in dark blue) are still covering their cash costs. However, the mine on the far right hand side of the cost curve is only just recovering their cash costs, so if the price has further to fall, they will be under immediate pressure.

Even for Queensland's lowest cost producer, these low prices don't leave much headroom to pay for the return on capital and all the other aspects of the business. Each of the Queensland copper producers will be working hard to reduce their costs to try and work their way down the cost curve.

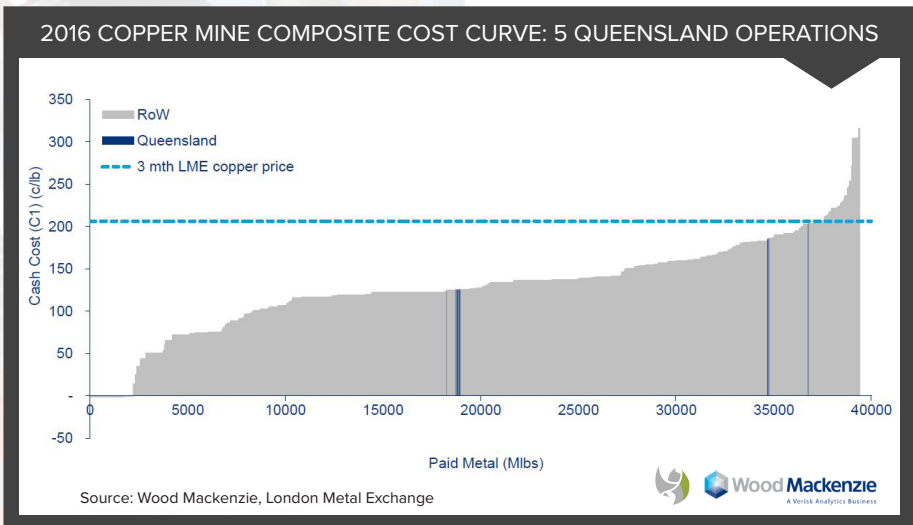


FIGURE 2: QUEENSLAND ZINC MINES

As for copper, the three Queensland zinc operations (shown in dark blue) are all covering their cash costs.

However, the cost curve is relatively flat, which means that a relatively small decline in the price could leave all three operations under pressure as they are in the top half of the cost curve.

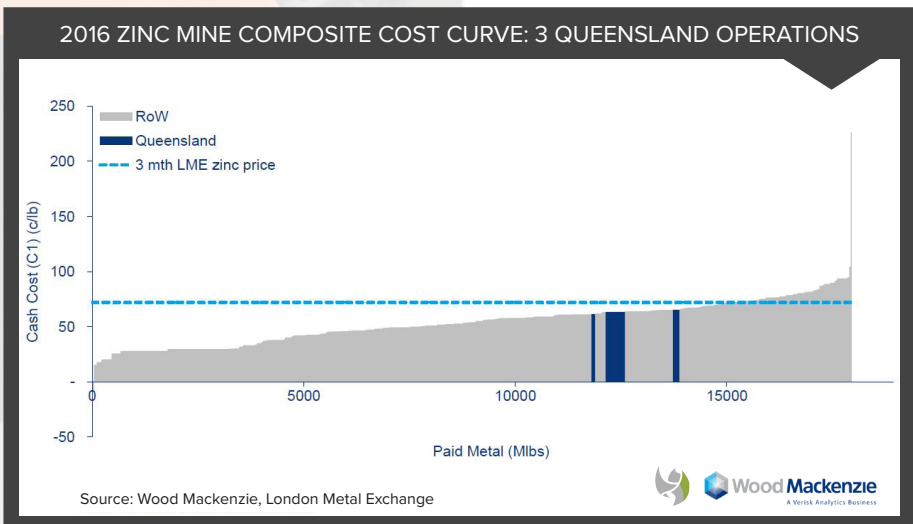


FIGURE 3: THERMAL COAL – UP TO FIFTY PERCENT OF MINES ARE NOT COVERING THEIR COSTS

While demand remains for thermal coal, so that all product continues to sell, the price has remained soft. The graphed price is a spot price and not all of Queensland's coal (shown in dark blue) is sold at spot prices, with many companies negotiating medium term contract prices.

This cost curve for thermal coal presents a fairly bleak prospect. The market remains oversupplied and a focus on efficiency has seen some producers increase their production rates in a bid to lower their unit costs by spreading their fixed capital costs over a larger volume of production.

Of the 22 Queensland operations more than half (12 of 22 mines) are not covering their cash costs. Many of these mines are smaller, so on a tonnage basis, around a third of Queensland's 60 mtpa production of thermal coal is not covering cash costs.

2016 SEABORNE THERMAL COAL FOB CASH COST CURVE (ENERGY ADJUSTED): 22 QUEENSLAND OPERATIONS

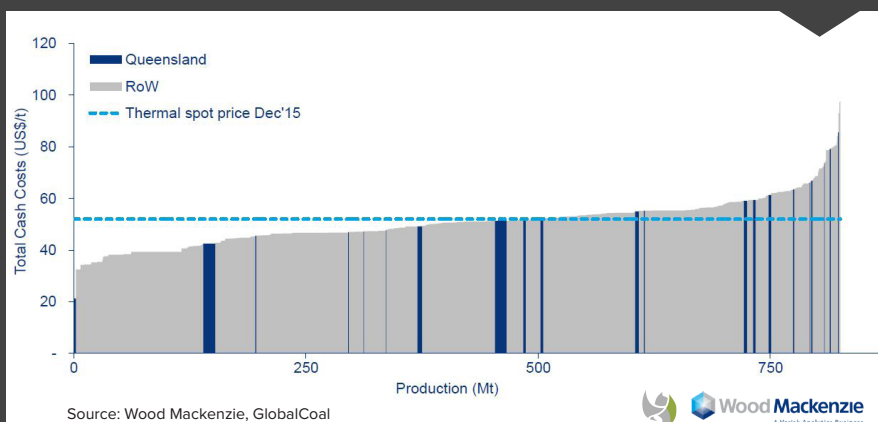


FIGURE 4: METALLURGICAL COAL – A QUARTER OF MINES ARE NOT COVERING CASH COSTS

The cost curves for metallurgical coal demonstrate how much market share is produced in Queensland (the dark blue columns, whose width indicates the volume of coal produced). Of the 37 Queensland operations, around a quarter (9 of 37) are not covering their cash costs. Many of these mines are smaller, so on a tonnage basis, around one in six tonnes from metallurgical coal mines (29 mtpa) are not covering their cash costs. The graphed price is a spot price and not all of Queensland's coal is sold at spot prices, with many companies negotiating medium term contract prices.

All coal producers have been making deep cuts to their mine site and corporate overhead costs.

However, a large proportion of a coal producers' costs are ex-mine site with rail, port, energy and water supply costs effectively fixed. Given that coal producers commit to 'take or pay' contracts for rail, port, water and power (meaning they pay for the contracted capacity regardless of whether they use that capacity), losses would typically need to be greater than the take or pay cost commitments before a mine opted to shut the operation down and incur the full take or pay liability and all other associated costs (rehabilitation, employment costs etc).

2016 SEABORNE METALLURGICAL COAL FOB CASH COST CURVE: 37 QUEENSLAND OPERATIONS

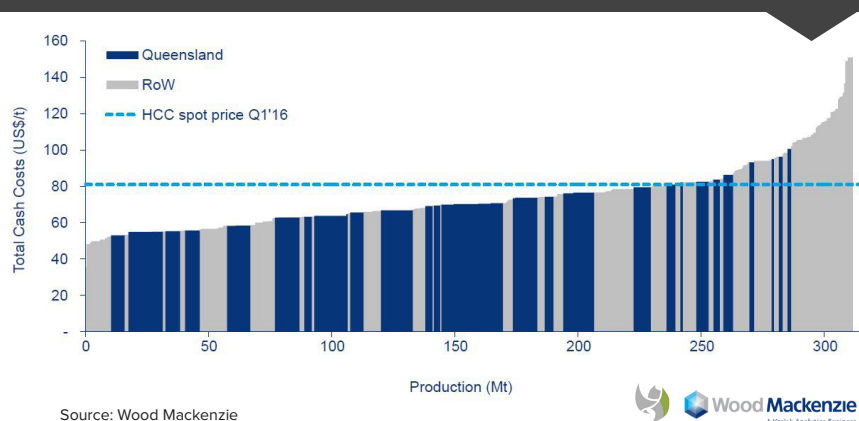
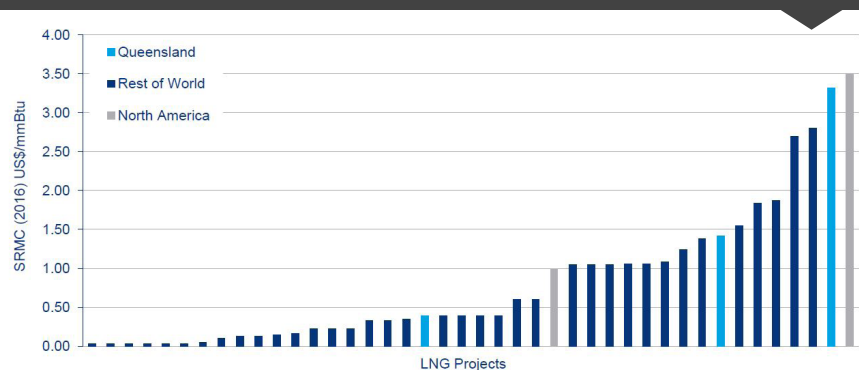


FIGURE 5: LIQUID NATURAL GAS – EXPENSIVE TO BUILD, CHEAP TO RUN

The pricing of natural gas contracts tends to be linked to the oil price, but with a complex structure of lags, caps and collars to adjust the contract price. The short term marginal cost shown above is a proxy for the variable or cash costs of running the plant. It is important to understand that these short term curves are very different to the long term curves, given the capital intensive nature of building an LNG plant most of the cost is fixed.

Even with oil prices currently sitting at around half where they were at the time investment decisions were made, Queensland LNG producers are covering their cash costs, but clearly they would like the oil price to recover so they can start paying off the tens of billions of dollars invested in building the LNG trains on Curtis Island.

2016 LNG PROJECTS SHORT-RUN MARGINAL COST: 3 QUEENSLAND OPERATIONS



LNG Projects in SRMC (2016) analysis include existing and under construction

KEY INDICATORS

QRC PRODUCTION VOLUME INDEX

QRC's quarterly production index tracks changes since 2006 in the total production of Queensland's traditional resource* exports – alumina, aluminium, bauxite, coal, copper, gold, lead, silver, and zinc.

The production volume index is weighted by value. This means changes in the volume of coking coal produced (more than 50 percent of the total value of Queensland resources production) has a proportionately larger impact on the index than, for example, changes in thermal coal production (representing approximately 10-15 percent of total value).

Total production volume increases

The index at the end of the September 2015 quarter (latest available data) rose to 134 points up from 133 points last quarter. This compares to an index of 127 during the September quarter last year.

The index base is June 2006 = 100, so the total volume of production has grown 34 percent since that time.

Despite low prices by historical levels, a number of commodities recorded increased production volumes over the September quarter including aluminium (145 kt to 146 kt), bauxite (6,941 kt to 7,119 kt), lead (110 kt to 131 kt) and silver (142 t to 336 t). Gold production (4.5 t) remained constant and only alumina (1,627 kt to 1,530 kt), copper (79 kt to 76 kt) and zinc (274 kt to 250 kt) recorded a decrease in production volumes. Coal exports in the September quarter were 56 million tonnes, a slight increase of a million tonnes on the previous quarter. Total coal exports for 2015 year were a record 220 million tonnes.

Weighing up the net result of these changes in production volumes, weighted by value generates the 1 point increase in the QRC Production Index over the last quarter.

While not yet incorporated into the QRC Production Index, this quarter saw the first export volumes published for LNG. Over November and December, a total of 1.6 million tonnes of LNG was exported, with the gas destined for markets in South Korea (40 percent), China (20 percent), Japan (20 percent), India (12 percent), Kuwait (4 percent) and Singapore (3 percent).

QRC PRODUCTION VALUE INDEX

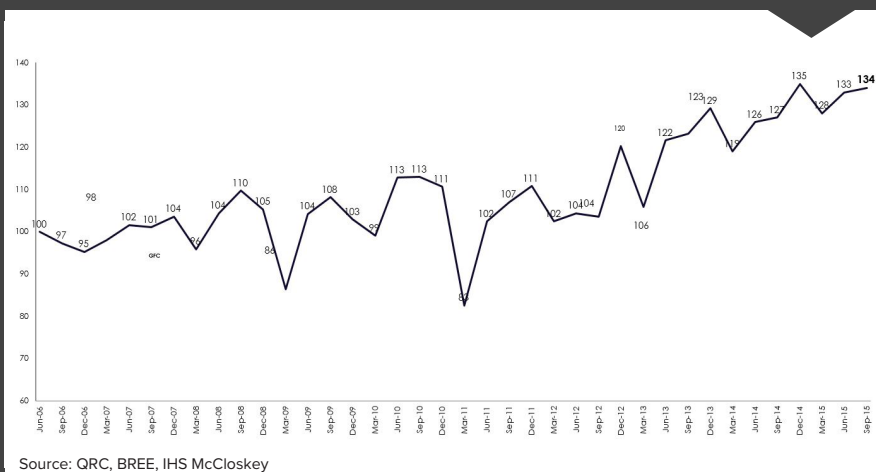
QRC's production value index reflects changes in the quantities produced of Queensland's resources at average global benchmark prices. The weighted index reflects the same mix of commodities as the QRC production index. Once again, LNG exports are not yet included in the index.

Total value drops further

The persistent oversupply for many commodities and slowing global consumption growth have meant most mineral and energy commodity prices declined in the past year. The index at the end of the September 2015 quarter (latest available data) fell from 118 points down to 114 points. In aggregate, the resources sector produced goods valued at \$A715 billion in the September quarter, down from \$A742 billion in the previous quarter.

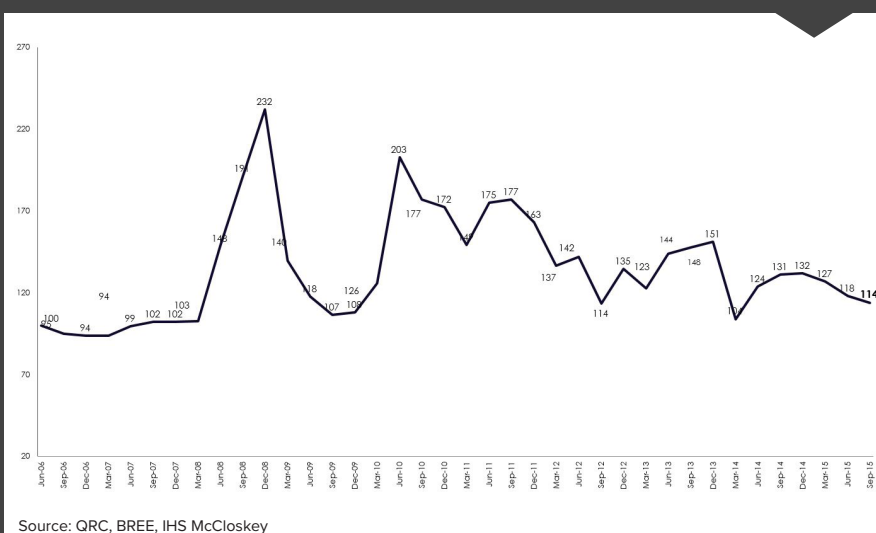
The September quarter decrease was a result of further price declines for all commodities excluding only alumina (\$US387 to \$US391) and lead (\$US1,973/t to \$US2,000/t). The largest price decreases were for silver and zinc, both falling approximately 20 percent over the quarter.

QRC PRODUCTION INDEX (QUARTERLY)
(INDEX BASE JUNE 05/06=100)



Source: QRC, BREE, IHS McCloskey

QRC VALUE OF PRODUCTION INDEX (A\$) (QUARTERLY)
(INDEX BASE JUNE 05/06=100)



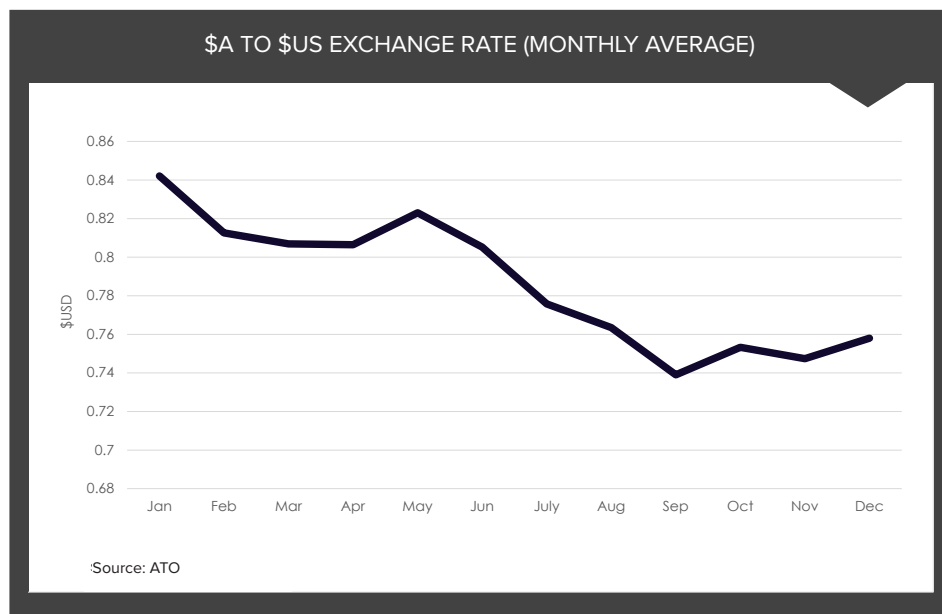
Source: QRC, BREE, IHS McCloskey

*Please note, due to limited pricing data, we are yet to integrate LNG prices and volumes into the index.

MARKET OUTLOOK

The following outlook information is largely drawn from the December edition of the [Resources and Energy Quarterly](#), produced by the Office of the Chief Economist, Department of Industry, Innovation and Science.

The Australian dollar has depreciated against the US dollar over the past twelve months and returned to levels last recorded in 2009-10. In their latest publication the Office of the Chief Economist have lowered their forecast of the AUD-USD average exchange rate from 0.74 US to 0.71 US, which is around the current spot rates. The chart on the right shows the fall in the AUD-USD over calendar year 2015.



Thermal coal

The International Energy Agency's (IEA) recently released World Energy Outlook 2015 (WEO) confirmed the medium term demand for thermal coal. The report notes that coal demand will still grow through to 2040, albeit it at a slower pace; however in our region (India and South-East Asia) coal demand will triple. The IEA states that: coal remains the backbone of the power system in many countries and new coal-fired power technologies will play a crucial role in climate change efforts, with China leading the way in building ultrasupercritical coal-fired generation and India utilising supercritical technology as well.

Metallurgical coal

Lower steel production in China combined with an increase in domestic coking coal supply contributed to lower metallurgical coal prices through 2015. According to the Office of the Chief Economist, spot prices for low volatility hard coking coal FOB Australia averaged an estimated US\$89 in 2015, down 22 percent from the 2014 average. Contract prices for high quality hard coking coal declined 19 percent in 2015 to average US\$102.

Long term demand fundamentals remain strong for Queensland coking coal and despite closures and some production cuts, the majority of growth in world metallurgical coal exports is expected to come from Australia in the short run. The latest WEO forecasts that Australia will regain its position as the world's largest coal exporter by 2040, with strong demand from India and South-East Asia

Gas

LNG prices are expected to remain subdued over the next year, with oil prices remaining relatively low and increased liquefaction capacity coming online. Australia's LNG exports are forecast to grow as new capacity comes online but this growth in export values will be tempered by downward pressure on prices. The Office of the Chief Economist estimates the landed LNG prices in Japan (Australia's largest LNG market) in 2015 to be around US\$10.30 a gigajoule. Prices are forecast to decline further in 2016 to around US\$8 a gigajoule, as the effects of the relatively low oil prices in late 2015 flow through. Spot prices are also expected to remain subdued due to increases in global supply outweighing increases in global demand.

Metals

The December edition of the *Resources and Energy Quarterly* notes that over the short term, slowing global consumption growth is expected to continue to place downward pressure on prices for most metals. The aluminium price is forecast to average US\$1,575 a tonne in 2016, a decrease of 5 percent relative to 2015. However, the price decline is expected to be less than in 2015, as demand is forecast to be supported by increased use of aluminium in automobile manufacturing to reduce vehicle weights and meet fuel-efficiency requirements. In 2016, the average zinc spot price is forecast to decrease by 4 percent to US\$1,865 a tonne. Prices are expected to stabilise and then recover, supported by tightening supply as several large producers reduce output in response to lower prices and some assets reach the end of their operating lives. Average LME copper prices are forecast to decline by a further 16 percent to US\$4,786 a tonne in 2016.



QRC CEO SENTIMENT INDEX

The QRC CEO Sentiment Index is a quarterly survey of QRC's producer and explorer members with the typical sample size ranging between 20-35. The participating companies cover the majority of mining and energy, minerals processing, contracting, exploration, electricity generation and oil and gas extraction activity in Queensland. Each quarter the respondents are asked to nominate to what extent 11 factors will positively or negatively impact upon the objectives of their organisation over the next 12 months. All responses are weighted to create a Sentiment Index and for this edition we've reported the top six (most negative) key issues over the last 12 months and grouped them as reflecting either domestic/Australian or international operating conditions.

CHART 3: CEO SENTIMENT RESULTS TOWARDS DOMESTIC OPERATING CONDITIONS (TOP 3 WITH NEGATIVE SENTIMENT)

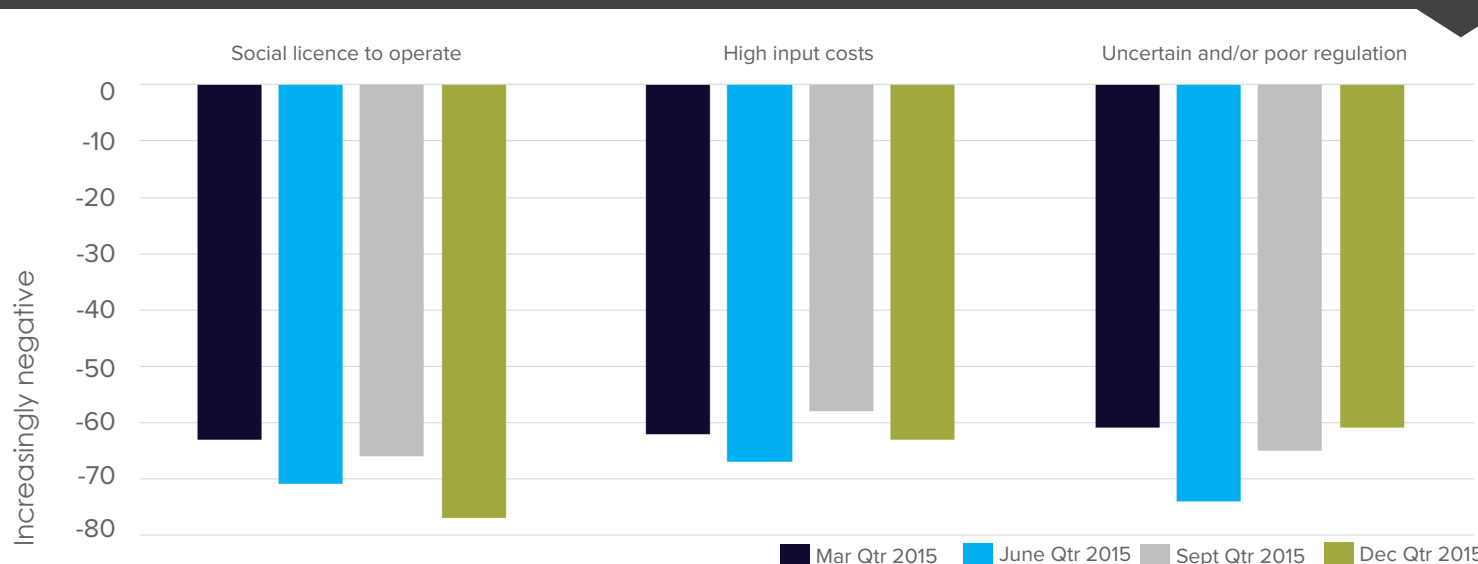


Chart 3 shows that over the previous 12 months sentiment towards social licence to operate has worsened which translates to an increased concern for social licence pressures over the coming 12 month period. Sentiment towards high input costs and uncertain and/or poor regulation has varied with the worst sentiment recorded in the June quarter for both factors.

CHART 4: CEO SENTIMENT RESULTS TOWARDS INTERNATIONAL OPERATING CONDITIONS (TOP 3 WITH NEGATIVE SENTIMENT)

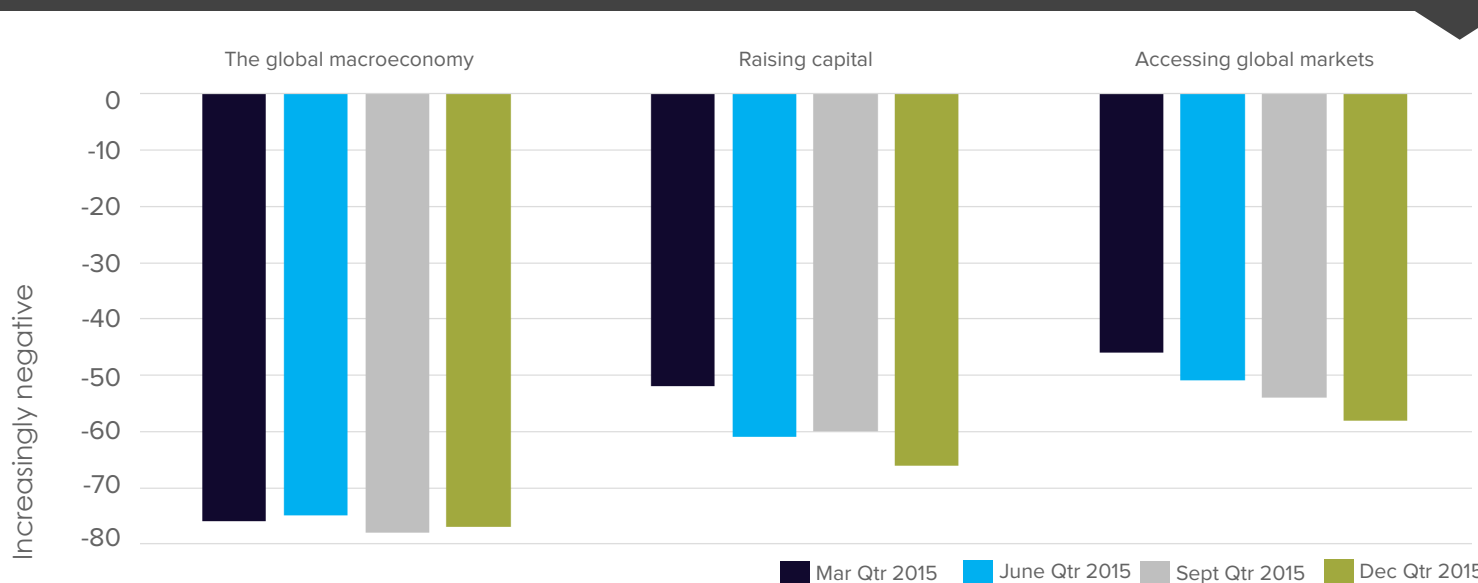


Chart 4 clearly shows the overwhelming negative sentiment towards the global economy with comments provided by respondents citing the slowing of the Chinese economy, low commodity prices and general oversupply in many commodity markets as the greatest contributors to the negative sentiment. Both raising capital and accessing global markets have deteriorated in sentiment over the past 12 months revealing the capital restrictions and tight investment conditions in the resources sector at present. The decline in sentiment towards these factors suggest there is little confidence of an improvement in the next 12 months.