QUEENSLAND resources COUNCIL

Working together for a **shared future**

19 February 2009

Committee Secretary
Senate Select Committee on Fuel and Energy
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600

Email: fuelenergy.sen@aph.gov.au

Dear Committee Secretary

Thank-you for the opportunity to appear before the Committee on Friday, 20 February 2009. Please accept this correspondence as our formal submission.

The Queensland Resources Council (QRC) is a not-for-profit peak industry association representing Queensland's minerals and energy sector. The QRC works to secure an environment conducive to the long term sustainability of the minerals and energy sector in Queensland.

The combined output of these sectors was in excess of $40 billion in 2007/08 – accounting, directly and indirectly, for approximately 19 per cent of Queensland's economy (Gross State Product), and approximately 12 per cent of total full time equivalent employment. More details of the growing socio-economic contribution of the minerals and energy sectors are contained at **Attachment One**. Further, **Attachment Two** contains a Queensland region by region breakdown of the economic and employment contribution of the mining sector.

QRC Position on Climate Change

The QRC has a clearly enunciated policy position on energy and climate change. In principle, we believe an emissions trading scheme is the most appropriate means of using the discovery powers of markets to identify and implement least cost opportunities to reduce emissions. Further, we support the Commonwealth's "three pillars" approach of focussing on (a) reducing emissions, (b) adapting to change and (c) actively building a global response; as representing a sensible division of effort between prevention, cure and international leadership.

Specifically in relation to coal:

- The industry is playing its part through practical action under its COAL21 initiative and the voluntary $1 billion COAL21 Fund, in demonstrating the technical and economic viability of the major low emissions coal technologies;
- As global demand for coal is expected to grow by two per cent a year to 2030, it is imperative that the technology to capture and store the CO_2 that is generated is proven up as quickly as possible. Australia has a leadership role in this field – in developing the technology, demonstrating it in Australia as part of a contribution to the international effort, and helping to disseminate it globally; and

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- The coal industry has welcomed significant government commitments to funding low emissions technologies in Australia with further commitments anticipated.

The Evolving Global Environment

Three significant issues currently confront the mining and energy sectors:

(1) higher input costs (with the attendant global competitiveness concerns);

(2) current global uncertainty emanating from global liquidity and credit issues and the subsequent significant fall in consumer and business sentiment; and

(3) uncertainty in relation to whether global competitors are going to take positions at the United Nations Climate Change Conference at Copenhagen (COP15), or indeed in the design of their own domestic carbon abatement schemes, that impose comparable carbon liabilities on their competing industries.

In relation to higher input costs, government statistics estimate that these have increased from 34.7 per cent for underground operations, and 60.7 per cent for open cut operations between 2002 and 2007. For sectors such as coal, this places most of Australian industry in the highest quartile of global costs.

In relation to current economic slowdown, the effect on the sector is substantial and is overviewed at **Attachment Three**. In short:

- Companies are experiencing significant difficulty in obtaining capital, with priority being given to deleveraging their balance sheets to mitigate against refinancing risk and to maintain cashflow and viability;

- Significant reductions in global demand and prices.

  The QRC's Production Index is expected to drop 21 per cent between September 2008 and March 2009. In terms of value, this is significant - A$15.7 billion to A$11.6 billion.

  Further, the QRC's Price Index (measured against a base of June 2005/06 as 100) will be expected to fall from an index of 257 from December 2008 (remaining very high reflecting buoyant coal prices due to contracting arrangements and depreciated Australian dollar) to 148 by March-April 2009 (when all commodity price reductions are realised both contractually and in spot markets); and

- Queensland's major trading partners are expected to recover only slightly by 2010 (as below).

Queensland's Major Resource Trading Partners

Levels of GDP*

	2007	2008	2009[f]	2010[f]
Japan	2.4	-0.3	-0.2	0.8
ASEAN - 5^	6.3	5.4	3.1	4.5
India	9.3	7.3	5.3	7.1
France	2.2	0.8	-1.8	2.2
Germany	2.5	1.2	-1	0.4
United Kingdom	3	0.7	-1.5	0.8
China	13	9	7.5	8.1

*** IMF forecasts**

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^ Indonesia, Malaysia, the Philippines, Singapore and Thailand

In relation to the COP15, the current global economy may undermine efforts in achieving a comprehensive Global Protocol. As such, competing countries to the Australian metallurgical and thermal coal sectors such as Indonesia, South Africa, Columbia and China are unlikely to accept binding targets in Copenhagen – with perhaps the exception of Canada and the United States (metallurgical). The evolvement of more progressive domestic carbon abatement policies outside of COP 15 arrangements may also be hindered by current macroeconomic uncertainties.

The impact of the CPRS White Paper on the Queensland resources sector

The QRC in October 2008 commissioned ACIL Tasman to independently assess the impact of the then Green Paper Carbon Pollution Reduction Scheme (CPRS), including the impact of the proposed EITE assistance measures (i.e administrative allocation of permits), on the future earnings of ten different Queensland mining and minerals processing operations (those that could reasonably be categorised as emissions intensive trade exposed (EITE)), under a number of different scenarios. The full report (*CPRS Impacts on EITE Mining/Processing Activities (Queensland Case Studies) November 2008*) is available upon request. A summary of the major findings of this analysis are at **Attachment Four**.

The financial model that was used to undertake this analysis was then re-run with the White Paper settings, as well as a number of assumptions applied by the Treasury, to provide an updated assessment of the impact of the CPRS on the same 10 operations. Detailed 'site-by-site' findings of this White Paper analysis is at **Attachment Five**.

Covering aluminium, alumina, two thermal coal, two coking coal, two non-ferrous ore, a non-ferrous smelting and a non-ferrous refining site, and applying conservative assumptions in relation to future revenues, carbon costs, input costs, and new plant costs, the analysis found that the design and quantity of assistance proposed in the White Paper will not be adequate for a number of these operations to sustain levels of EBITDA (earnings before interest, tax, depreciation and amortisation) to allow further investment (high risk) and/or sustain adequate earnings (moderate risk) to remain commercially viable.

Key Findings – Modelling of the CPRS White Paper and Impacts on Ten Different Sites

Operation	**Direct FTE Employment**	**Short to medium term commercial viability**	**Invest further**
Aluminium (Australia wide)	5,000 Australia wide	May be compromised	Might not be expected
Alumina (Australia wide)	6,900 Australia wide (plus 2,000 involved in bauxite)	May not be compromised	Might be expected
Black coal – export coking (opencut) operation in QLD	250	May be compromised	Cannot be determined
Black coal – domestic thermal (opencut) operation in QLD	450	May not be compromised	Might be expected
Black coal – export coking (longwall) operation in QLD	250	May be compromised	Might not be expected
Black coal – export thermal (opencut) operation in QLD	100	May be compromised	Might not be expected
Non-ferrous metal ore (underground) operation in QLD	tbc	May not be compromised	Cannot be determined
Non-ferrous metal ore (opencut) operation in QLD	tbc	May not be compromised	Cannot be determined
Non-ferrous ore smelting operation in QLD	300	May not be compromised	Might be expected
Non-ferrous ore refining operation in QLD	300	May not be compromised	Might not be expected

In summary, and looking specifically at the impact of the CPRS in conjunction with the (expanded) Renewable Energy Target:

- 4 of the 10 sites analysed recorded earnings so low that their short to medium viability may be compromised with premature shutdowns a risk; and

- 4 out of 10 sites recorded earnings so low that they would not be able to cover the capital cost of replicating a site of comparable size, type and location.

Whilst in reality it is difficult to say with confidence whether the CPRS alone would cause premature shutdowns or deter more investment as a host of other external and internal drivers factors would typically be considered, the modelling does provide an indicative assessment based *on all things being equal.*

QRC's Concerns with the CPRS White Paper

The QRC's immediate concerns with the White Paper include:

- Whilst the proposed (unconditional) 5 per cent cut by 2020 appears modest, it will require significant cuts in emissions (250 million tonnes off projected business as usual [BAU]) and will impose significant costs on the Australian economy – in the absence of lower carbon liabilities and/or greater transition assistance to strongly affected industries until such time the rest of the world comes on board. Of significance is that the proposed Australian emissions trading scheme is far broader in coverage and more punitive in carbon liabilities than any other actual or proposed scheme in the world.

- The proposed scheme cannot be easily calibrated to address critical external factors such as the lack of comparable carbon costs by our competitors, very high input costs, and economic downturns such as that being experienced now. As such, it has the potential to significantly and adversely impact certain industries within Queensland's minerals and energy sectors.

- Despite qualifying for the EITE 60 per cent assistance category, coal mining will be unilaterally excluded from receiving such assistance. The industry will instead qualify for $750 million (over five years) under two fund arrangements. These funds are conditional upon abatement activity being undertaken (a unique request compared to the treatment of other EITE sectors), and will provide a much lower effective level of assistance than if 60 per cent free permits were granted.

- The CPRS proposes to include methane, the gas generated by the fugitive emissions from coalmining, despite strong reservations from countries within the EU scheme and now New Zealand. Further, methane is extremely difficult to measure, with some companies indicating that current measurement methodologies may overstate emissions by 30 times.

- Despite assertions from government, abating greenhouse gases within the sector remains costly and difficult.

  For example, and specifically in relation to coal, it should be noted that whilst some abatement options are available at reasonable cost for 'methane rich' coal seam gas emissions from underground mines (typically much more gassy than opencut mines), around half of the methane emissions are contained in mine ventilation air, for which economic abatement options are currently not available. The research and development costs associated with the technologies to address these emissions are very high – thereby bringing into question the policy merit of significant carbon liabilities when this signal alone is unlikely to be effective in addressing the market failures and facilitating the R&D spend that is required.

- It appears to continue the trend in Australian public policy that the minerals sector can be treated differently from other sectors due to its perceived capacity to pay. Examples include the advent of take or pay contracts in hard infrastructure provision where the mining

proponent accepts 100 per cent of risk and cost burden in return for access to infrastructure such as rail and ports; increases in royalties without industry consultation; and an expectation that government's responsibilities for the provision of soft infrastructure can be devolved to industry.

- Despite estimations that the CPRS will impose a $3 billion direct asset loss on Queensland's black coal-fired generation fleet over their remaining lives, it is not clear why they will only receive two per cent (or $60 million) of the proposed assistance measures during the first five years of operation of the CPRS. By contrast, and despite having very high emissions intensities, Victorian brown coal-fired generation assets are expected to receive $3.4 billion in direct assistance, representing approximately 75 per cent of asset losses associated with the introduction of CPRS.

Improving the White Paper Package

The QRC continues to work closely with associated industry associations – notably the Minerals Council of Australia, the Australian Coal Association, and the Australian Aluminium Council, in developing a collegiate and consistent industry wide response to the policy proposed in the White Paper.

Consistent with representations already made before this committee, and in the absence of other issues that may arise following the release of draft legislation and other guidance material (for example, how to calculate eligibility for EITE assistance), the QRC supports in principle the following improvements:

- The CPRS cannot operate in isolation from the business environment in which affected parties will compete and operate. The scheme does not appear flexible enough to be calibrated to substantive risks, notably economic downturns, very high structural costs and diminished competitiveness, and uncertainty in relation to whether competing countries will face comparable global carbon costs.

  For example, companies with scope 1[1] carbon liabilities will over time be required to pay progressively more for an increasingly smaller pool of permits (i.e the decay function – refer below) regardless of the business environment and the availability of abatement opportunities. The solution is to have a scheme that imposes carbon costs, and/or alternatively gives transition assistance, commensurate to the cost impacts of these types of risks.

- Fair treatment for the coal industry. It should be included in the EITE arrangements as the best way to address the risks to its international competitiveness. In short, the same rules that apply to the rest of industry should apply to coal.

- On equity and energy security grounds, permits should be allocated to captured coal mine owners where cost pass-through is restricted or unavailable. Where pass through is available (fully or partially) then the generator should be compensated under the Electricity Sector Adjustment Scheme (ESAS).

- Specifically in relation to the ESAS, there needs to be an increased quantum of assistance for the black coal electricity generators by re-aligning the allocation of assistance so as to not stymie much needed investment in low-emission generation by black coal generators in Queensland. There is a risk of perverse market outcomes being concentrated in Queensland including an immediate impact on the value of the Queensland government's $8 billion in coal-fired generation assets.

- The carbon productivity contribution which is set at 1.3 per cent per year should be removed. The 5 per cent 2020 abatement target will require abatement greater than 5 percent per annum of 2000 emission levels. As such, government has decided that a 1.3 per cent

[1] The release of greenhouse gas into the atmosphere as a direct result of an activity, or series of activities that constitute that activity and that will require a permit to emit under the CPRS

reduction in the quantum of free permits to be made available to EITE industries is fair as it is less than the national 5 per cent national contribution, but still high enough for EITE industries to make a contribution.

Of the very small quantum of EITE industries that will be eligible for free permits (estimated to be 10 per cent of total production), these industries will still be liable to liable for 10-40 per cent of their emission permits. This in itself will ensure that companies 'make a [substantive abatement] contribution'. Further, and with global demand for most commodities expected to increase again strongly in the future, it is not clear whether the base of free permits to be made available will increase proportionally more to accommodate new entrants and new production.

- The capacity of the sector to implement low emission technologies (if they exist) during periods of stressed cash flow, and in response to carbon price signals alone, needs to be more closely considered. As stated, the quantum of 'scope 1' carbon liabilities alone will place a tremendous strain on company cashflows which in itself will prevent companies from adopting abatement technologies. Further, and given issues in relation to availability and suitability, a carbon price signal alone is unlikely to be entirely effective in promoting the adoption of new abatement technologies. That is, market failures will still occur and a continuing role for government will exist.

Conclusion

In conclusion, the immediate concern is ensuring the ongoing viability of current operations whilst encouraging behavioural changes en route to the new carbon economy. As demonstrated by ACIL's CPRS impact model, some operations will experience significant decreases in earnings as a result of the CPRS that will compromise cashflow, and in the absence of readily accessible and implemented abatement technologies, short to medium term commercial viability. Job losses and carbon leakage are therefore demonstrable risks.

The stronger finding of the ACIL analysis, and of potentially greater significance in terms of economic consequence, is the impact that the CPRS may have on future brown and greenfield expansions. The ACIL analysis demonstrates that whilst earnings may be such that the operation remains viable, EBITDA will be too low for most operations to consider expansions. Against the background of strong long term demand for most mineral and energy commodities, competing interests, and growing global investment options, lost opportunities in Australia in the longer term appear inevitable.

Given that the current CPRS policy is not flexible enough to be calibrated to external and internal influences such as the outcomes at COP15, and operating constraints such as very high input costs (in an ever competitive international environment) and economic downturn, the QRC encourages government to tread cautiously and to continue its dialogue with industry.

We look forward to discussing these matters on 20 February 2009.

Yours sincerely

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Chief Executive

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Attachment One

Queensland Resources Sector Socio-Economic Contribution

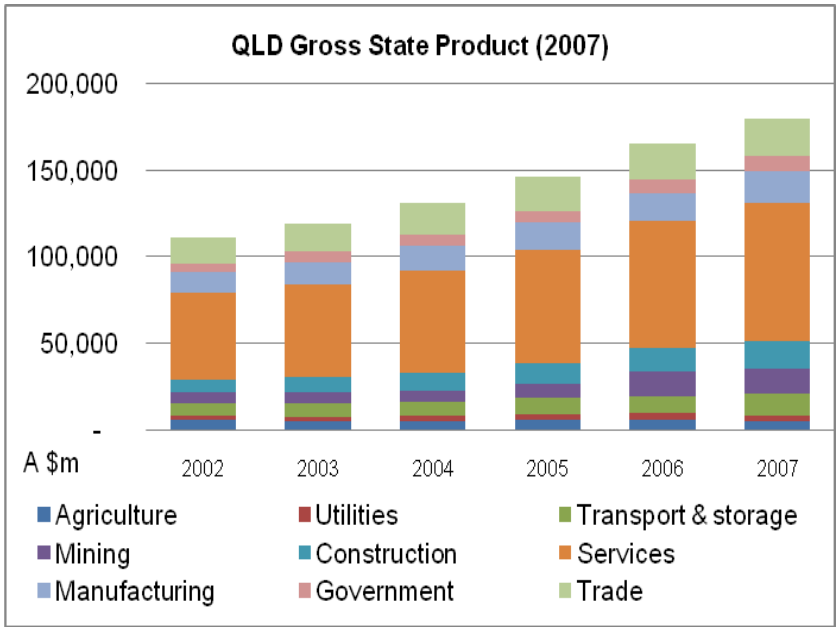
- In 2007, the sector[2] **directly and indirectly**[3] contributed $31.2 billion – or 20 per cent of Queensland's Gross State Product (GSP), as well as 191,300 full-time equivalent (FTE) jobs – or 12 per cent of total Queensland FTE employment. Further, it is estimated that mining accounts for more than 25 per cent of regional Queensland's[4] **direct** GSP.

    - Coal is the most significant commodity in Queensland – accounting for approximately half of the sectors GSP and employment contribution. As at November 2008, the Queensland coal sector had in excess of 22,000 FTE employees.

- The sector paid approximately $16 billion in wages and salaries to those employed directly and indirectly. Average weekly earnings in 'mining' are currently the highest of any industry in Australia.

- In 2006/07, paid $3.5 billion to the Queensland Government - accounting for approximately eight per cent of total Budget revenues.

- The sector's relative contribution to the Queensland economy continues to increase over time. For example, the sector's direct GSP contribution to the Queensland's economy was six per cent in 2002, increasing to eight per cent in 2007. This compares to agriculture (three per cent) and government (five per cent) in 2007.



- Discounting the current resources boom, this trend has been occurring for an extended period. Other sector's that have increased their net share of Queensland's GSP between 1990 and 2007 are mining, construction and some service industries.

[2] Defined as all on-shore mineral and metal resource and electricity production, including petroleum and gas.

[3] Through supply and demand relationships with important sectors such as manufacturing, construction, financial, property and transport

[4] All areas excluding Wide Bay and, Sunshine Coast, Gold Coast, Brisbane West Moreton

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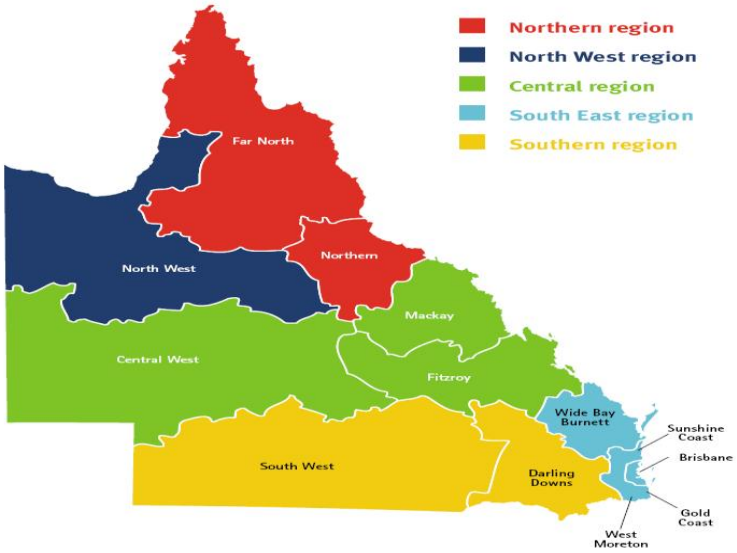
Attachment Two

Queensland Resources Sector: Value Added Output and Employment by Region



OUTPUT		EMPLOYMENT
(1) Construction	$1,615m	17,994
(2) Govt admin & Defence	$1,545m	6,165
(3) Retail trade	$1,437m	23,711
(4) Property & Business	$1,435m	Na
(5) Transport & Storage	$1,318m	10,875
(6) Agr, Forests and Fishing	$1,269m	10,217
(7) Mining	$615m	4,147

OUTPUT		EMPLOYMENT
(1) Mining	$3,456m	2,888
(2) Agr, Forests and Fishing	$202m	1,472
(3) Manufacturing	$169m	674

OUTPUT		EMPLOYMENT
(1) Mining	$13,134m	14,465
(2) Manufacturing	$2,080m	15,439
(3) Construction	$1,753m	15,398

OUTPUT		EMPLOYMENT
(1) Agr, Forests and Fishing	$1,940m	15,047
(2) Manufacturing	$997m	10,950
(3) Retail trade	$806m	12,552
(4) Mining	$713m	1,088

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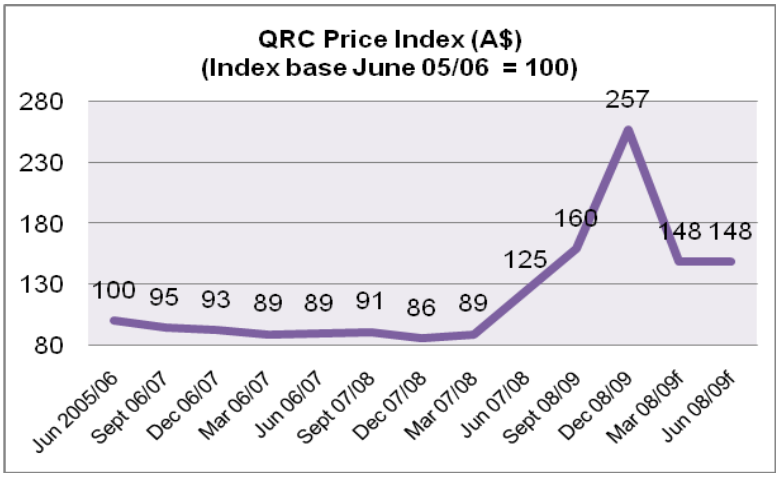
Attachment Three

Impact of the Global Financial Crisis on the Queensland Resources Sector

Prices



Comments

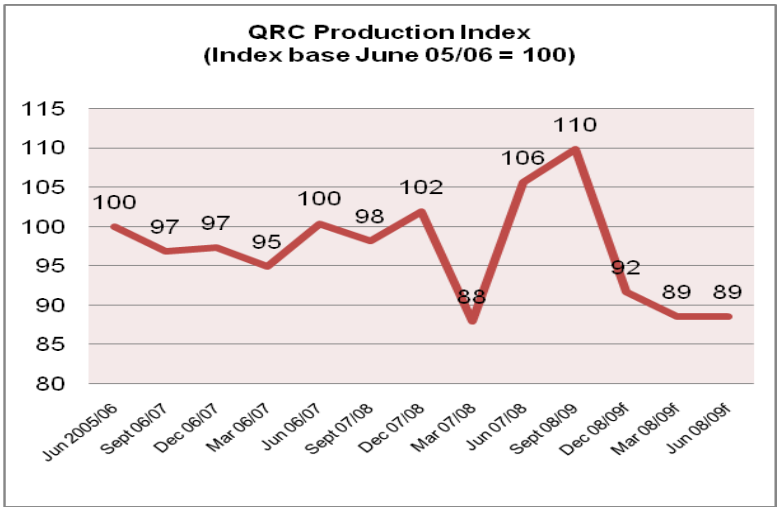
- Large decreases already for base and precious metals, with coal also beginning to drop as contracts are re-assessed

- The depreciated A$ has offset very large price decreases

- Relative to the last three years, prices remain relatively buoyant however (higher marginal and average costs appear to be factored in)

Note – forecast prices March and June 08/09 are from ANZ, Bloomberg and assumes A$D stays at near US$0.70c

Production



Comments

- Large production and value decreases as global demand softens strongly

- For example:

> September 2008 Qtr value of production was A$15.7 billion

> March 2009 Qtr value of production estimated to be A$11.6 billion

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Attachment Four

Executive Summary – CPRS Impacts (Green Paper) on EITE Mining/Processing Activities (Queensland Case Studies) November 2008 (as prepared by ACIL Tasman)

Key Points

- The assistance scheme proposed in the Green Paper and a variant in a subsequent discussion paper would strongly discourage new investment in emissions-intensive trade exposed industries. Investment would be discouraged even in the reference scenario, which is based on moderate assumptions.

- Widespread premature shut-downs of existing operations could occur in the medium-term future under more pessimistic scenarios than the reference scenario. Some shut-downs might occur, particularly beyond 2020, even in the moderate reference scenario.

- The quantitative analysis has shown that elimination of erosion of assistance rates in the schemes proposed by the Government would ameliorate the deficiencies of those schemes.

- The assistance scheme in the Green Paper involved several arbitrary elements that had not been analytically supported. Economically sound outcomes could be realised only in extremely unlikely multiple coincidences of circumstances.

- The Green Paper‟s proposal to reduce assistance over time at a pre-determined rate, even if no or little progress is made in competitor countries to apply emissions restraints, is inconsistent with the economic case for assistance and the Government‟s aims of reduction of carbon leakage and smoothing the transition to a low-carbon economy. The extent of the inconsistency would increase with the tardiness of competitor countries in adoption of meaningful measures to constrain emissions.

- A modified version of the assistance scheme proposed by the Garnaut Review would be the most attractive from an economic perspective. This scheme clearly ranked second from the perspective of owners of the operations modelled.

- From the perspective of the owners of the operations studied, a scheme capping the impact of emissions pricing on value added at 3 per cent would be the most attractive of the schemes modelled. This scheme ranked second behind the modified Garnaut scheme from an economic perspective.

- Criticisms of a scheme capping the impact of emissions pricing on value added in respect of the magnitude of assistance and adjustment burden borne by others have been contradicted by results of the qualitative and quantitative analysis.

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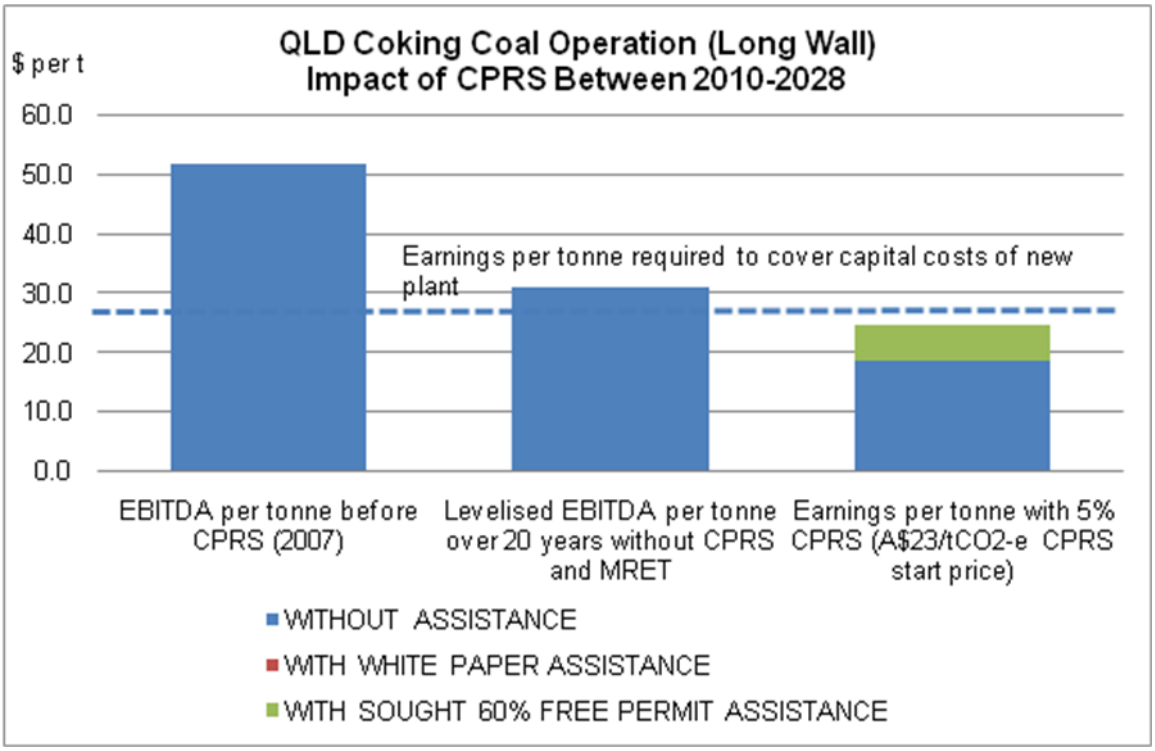
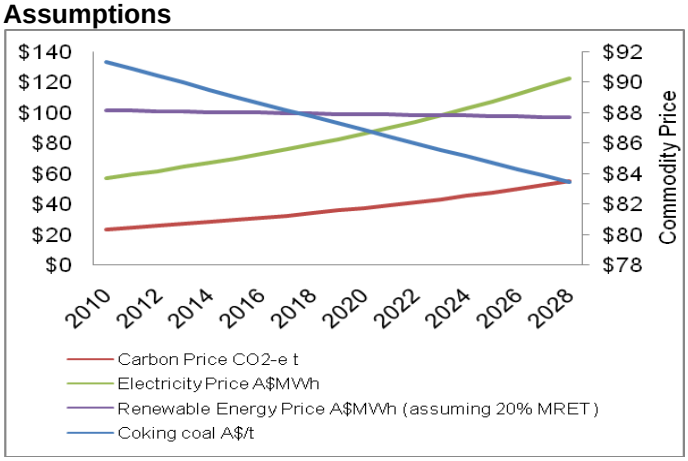
Attachment Five

Applying the QRC (ACIL Tasman) Financial model to assess the impacts of the CPRS White Paper on 10 Queensland EITE Mining/Processing Activities

Case Study #1 Results



Assumptions



Particulars

- 250 employees excluding contractors
- 3.6 million tonnes produced in 2007
- $36 million in scope 1 carbon permit liability in first year plus other associated scope 2 carbon costs – notably diesel and electricity
- A very 'gassy' site (i.e fugitives) (0.4 emissions per tonne of production) but with limited abatement opportunities

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be high enough over the next 20 years to cover the cost of new plant
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 60 per cent administrative allocation of permits would not be high enough to cover the cost of new plant
- The short to medium term viability of this site may be compromised and investment of a 'like' plant might not be expected as a result of the CPRS and MRET
- This site would benefit from the deployment of abatement technology

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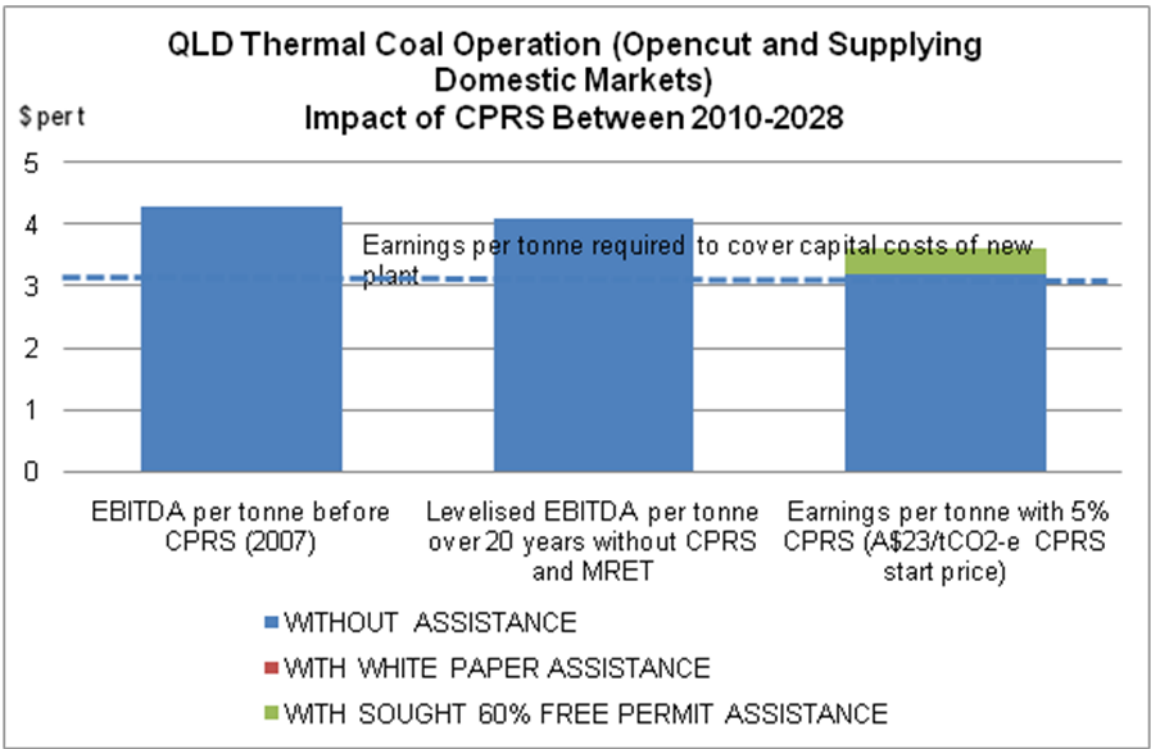
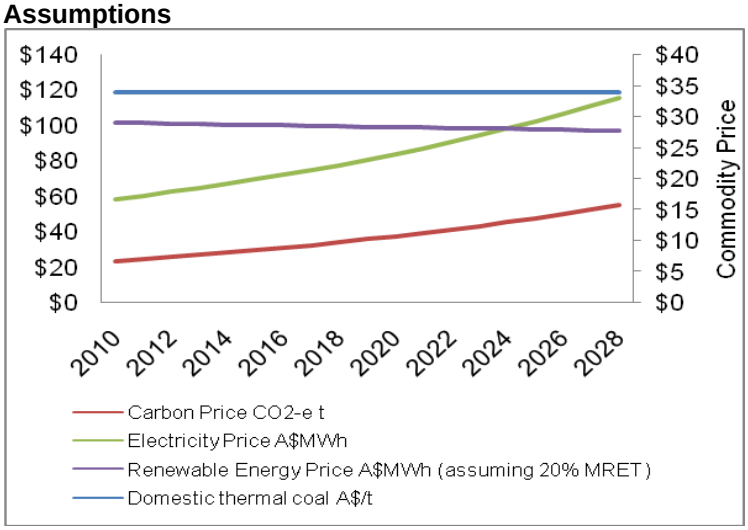
Case Study #2 Results



Assumptions



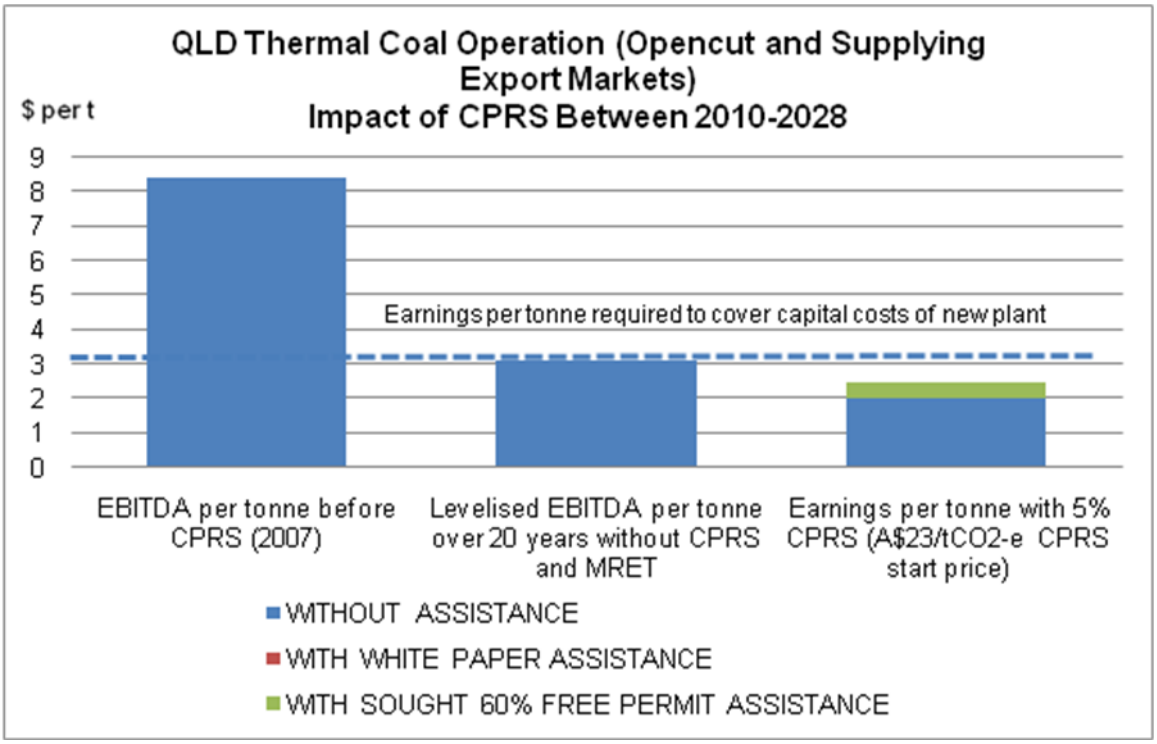
Particulars

- 450 employees excluding contractors
- 9.8 million tonnes produced in 2007
- $6.3 million in scope 1 carbon permit liability in first year plus other scope 2 costs (diesel, electricity etc)
- A relatively 'un-gassy' site (i.e fugitives) (0.02 emissions per tonne of production) but with limited abatement opportunities

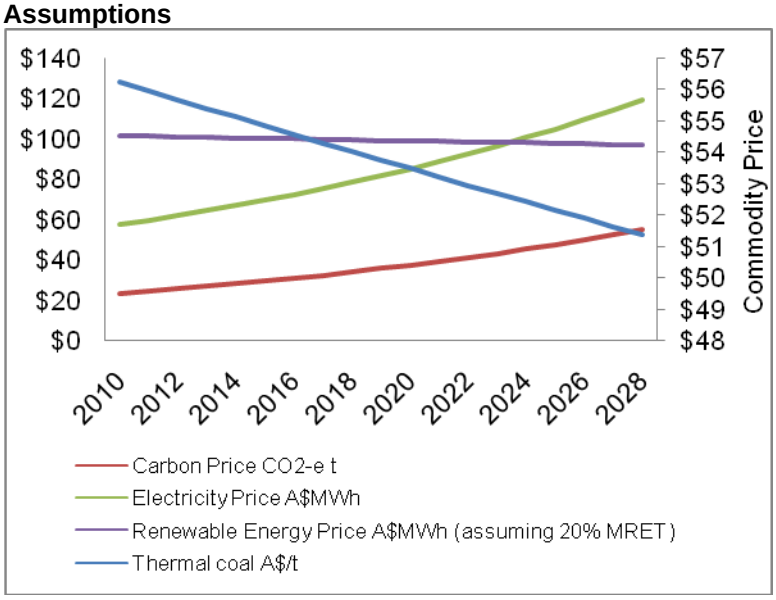
Key Findings

- A 'captured' coal mine supplying to the domestic power industry under a long term contract with limited prospect of being able to renegotiate a long-term (up to 20 year) commercial contract to pass through the impact of the CPRS
- Without cost pass through, EBITDA (levelised between 2010 and 2028) reduced to $3.20 per tonne produced – which is the same amount needed to cover the cost of new plant if this type of operation was to be duplicated
- With a 60% administration allocation of permits, this site's EBITDA (levelised between 2010 and 2028) would increase to $3.60 per tonne produced – an amount high enough to cover the cost of new plant
- The short to medium term viability of this site may not be compromised and investment of a 'like' plant may be expected as a result of the CPRS and MRET

Case Study #3 Results



Assumptions



Particulars

- 100 employees excluding contractors
- 1.9 million tonnes produced in 2007
- $1.9 million in scope 1 carbon permit liability in first year plus other associated scope 2 costs (diesel etc)
- A relatively 'un-gassy' site (i.e fugitives) (0.04 emissions per tonne of production) but with limited abatement opportunities

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be high enough over the next 20 years to cover the cost of new plant
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 60 per cent administration allocation of permits would not be high enough to cover the cost of new plant
- The short to medium term viability of this site may be compromised and investment of a 'like' plant may not be expected as a result of the CPRS and MRET

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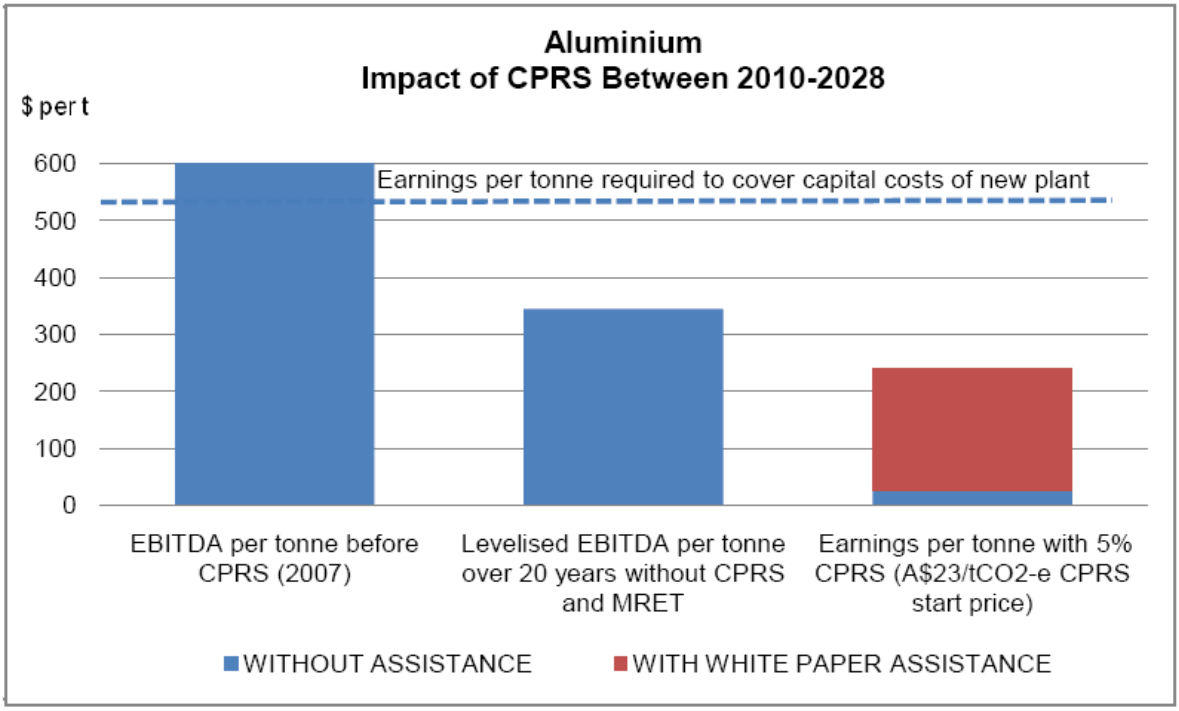
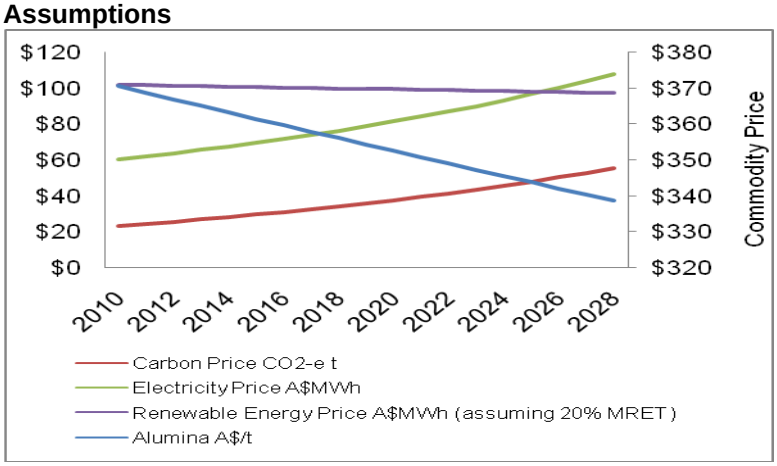
Case Study #4 Results



Assumptions



Particulars

Note - this data is Australia wide aggregated data and is not Queensland specific

- 5,000 direct employees excluding contractors
- 1.9 million tonnes produced in 2007
- $90.3 million in scope 1 carbon permit liability in first year (2010) plus other extremely significant scope 2 carbon costs – notably electricity
- Estimated that electricity cost by 2020 could rise from $56MWH (without CPRS and MRET) to $92MWH (with CPRS and MRET) or an extra $1 billion in electricity costs per annum

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would not be high enough over the next 20 years to cover the cost of new plant
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 90 per cent administrative allocation of permits would not be high enough to cover the cost of new plant
- New investment might not be expected and the ongoing viability of this industry may be compromised as a result of the CPRS and MRET

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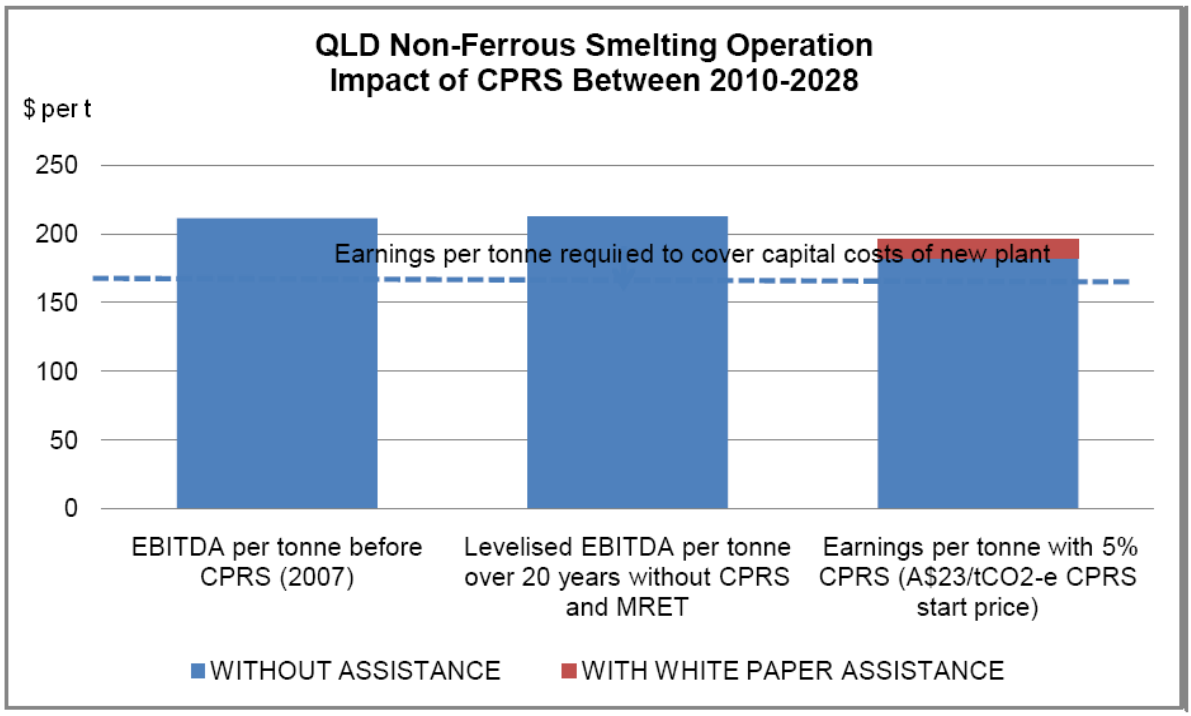
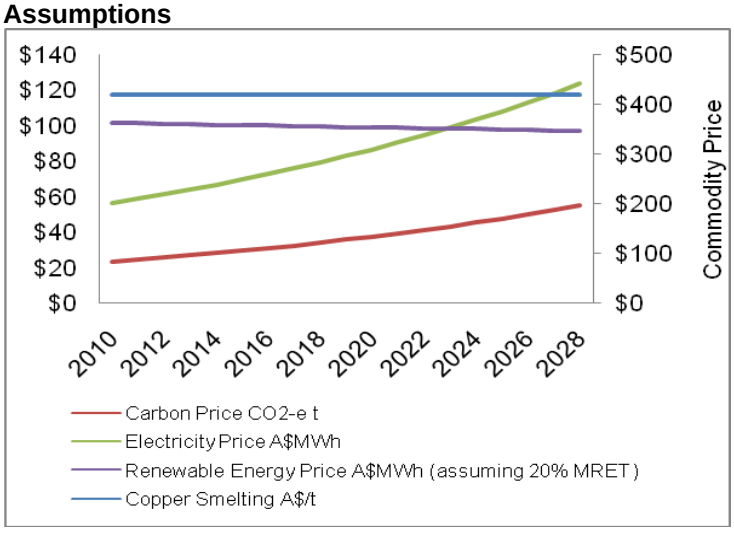
Case Study #5 Results



Assumptions



Particulars

- 300 employees excluding contractors
- 218,000 tonnes produced in 2007
- $2.4 million in scope 1 carbon permit liability in first year plus other significant scope 2 associated costs – notably electricity
- Estimated that electricity cost by 2020 could rise from $56MWH (without CPRS and MRET) to $92MWH (with CPRS and MRET) or an extra $7.4 million (approximately) in electricity costs per annum

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be high enough over the next 20 years to cover the cost of new plant
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 60 per cent administration allocation of permits would be high enough to cover the cost of new plant
- The ongoing viability of this site may not be compromised as a result of the CPRS and MRET and expansion may be expected

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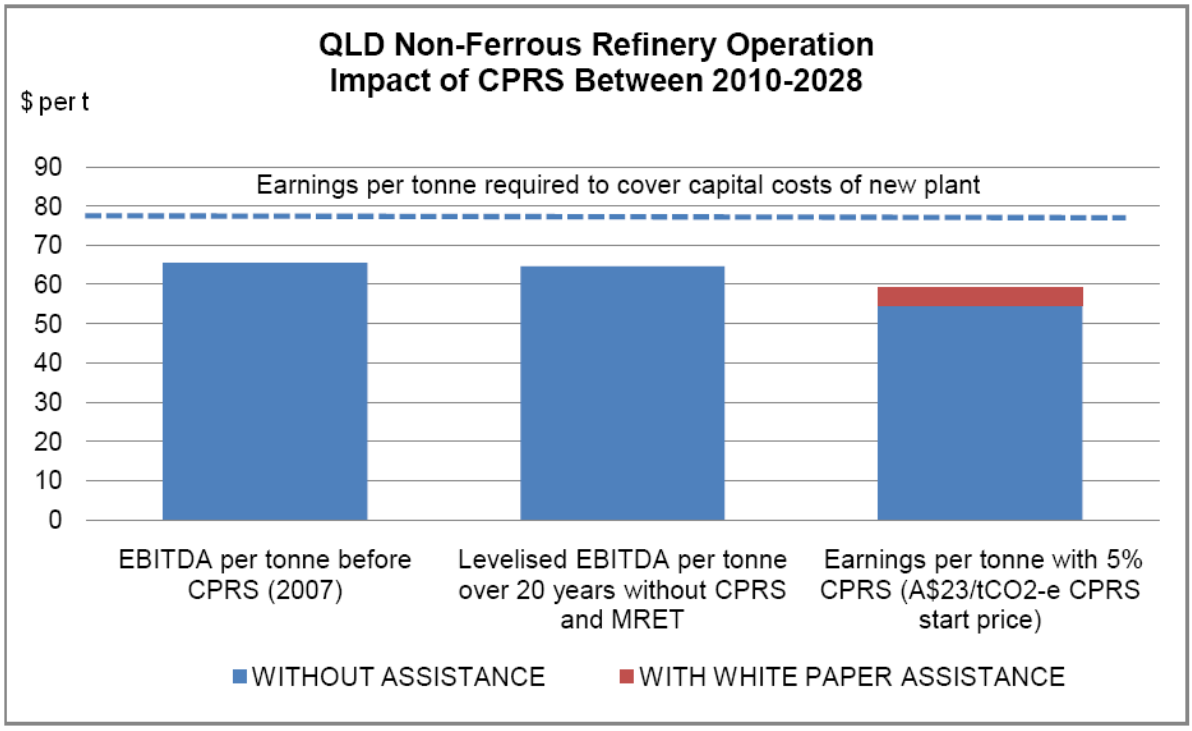
Case Study #6 Results



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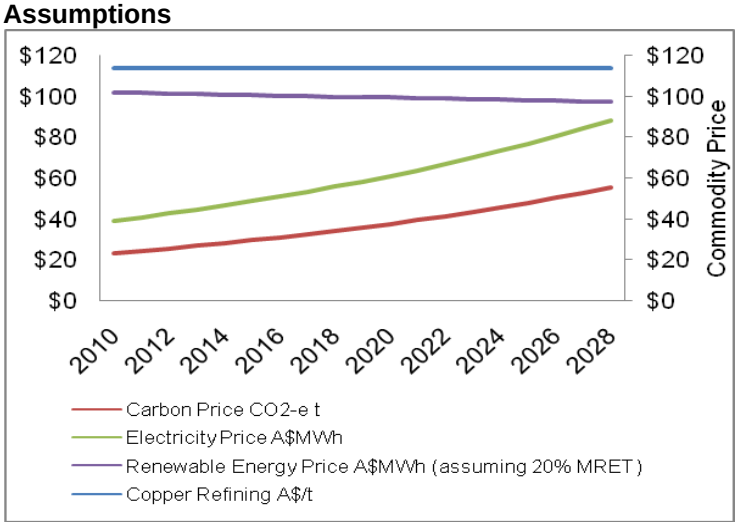

Particulars

- 300 employees excluding contractors
- 229,000 tonnes produced in 2007
- $300,000 in scope 1 carbon permit liability in first year (2010) plus significant other associated scope 2 carbon costs – notably electricity
- Estimated that electricity cost by 2020 could rise from $56MWH (without CPRS and MRET) to $92MWH (with CPRS and MRET) or an extra $3.2 million (approximately) in electricity and operating costs per annum.

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would not be high enough over the next 20 years to cover the cost of new plant
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 60 per cent administration allocation of permits would not be high enough to cover the cost of new plant
- The ongoing viability of this site may not be compromised as a result of the CPRS and MRET however expansion may not be expected

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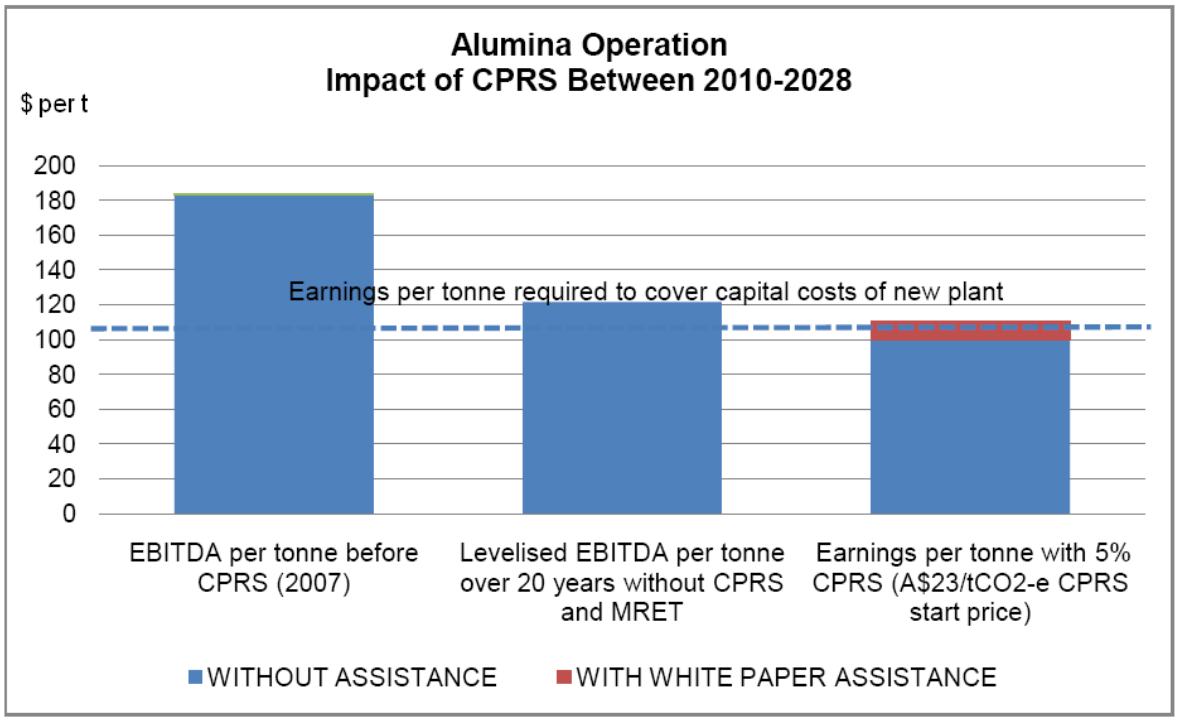
Case Study #7 Results



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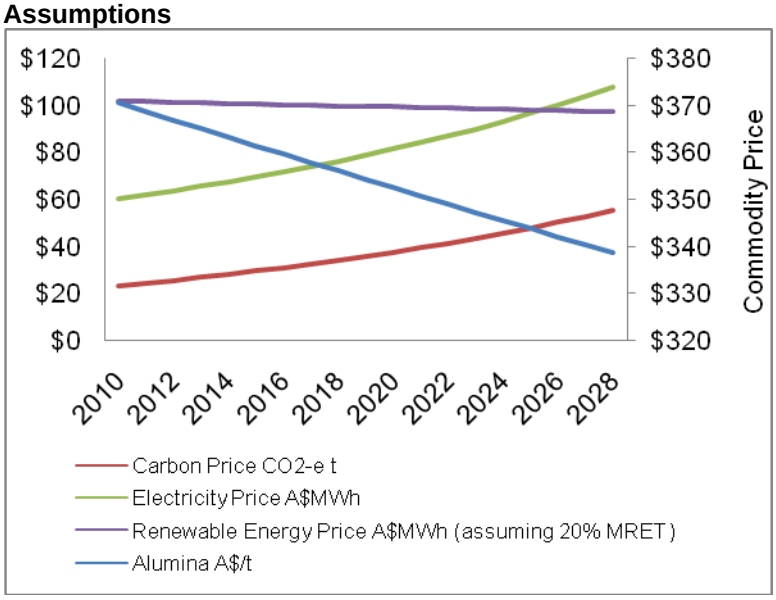

Particulars

Note - this data is Australia wide aggregated data and is not Queensland specific

- 6,900 direct employees excluding contractors (plus 2,000 involved in bauxite)
- 19 million tonnes produced in 2007
- $328 million in scope 1 carbon permit liability in first year (2010) plus other associated scope 2 costs – notably electricity and diesel

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be high enough over the next 20 years to cover the cost of new plant
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 60 per cent administration allocation of permits would be high enough to cover the cost of new plant
- New investment might be expected and the ongoing viability of this industry may not be compromised as a result of the CPRS and MRET

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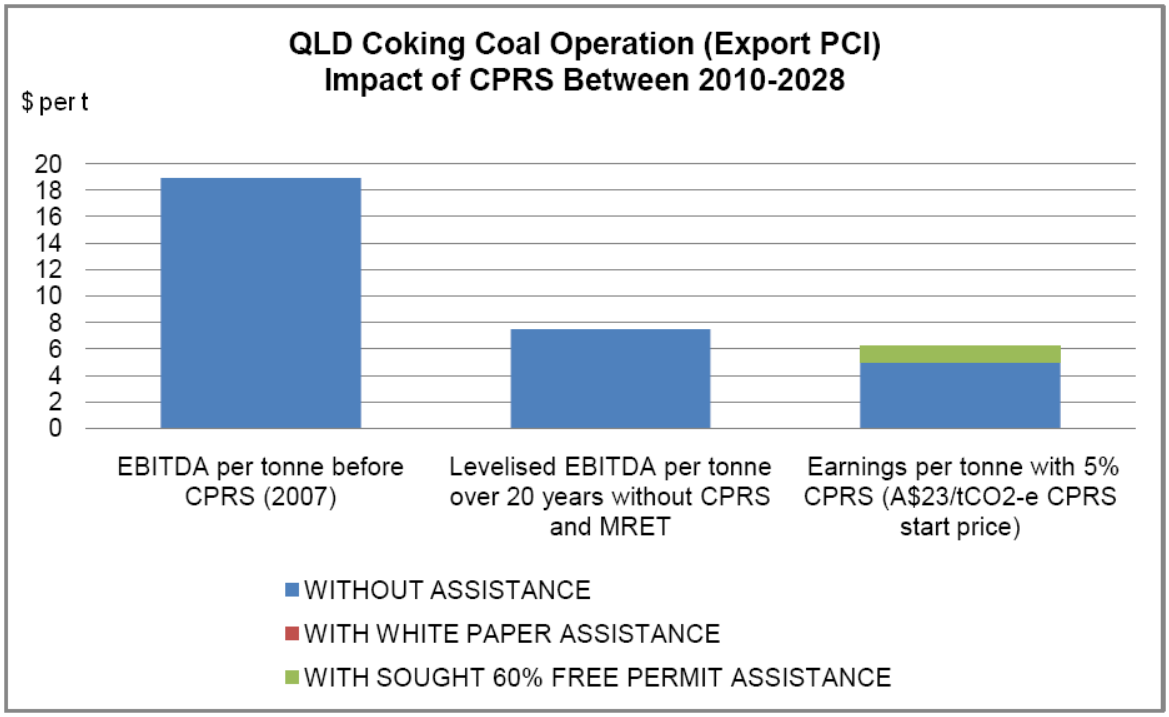
Case Study #8 Results



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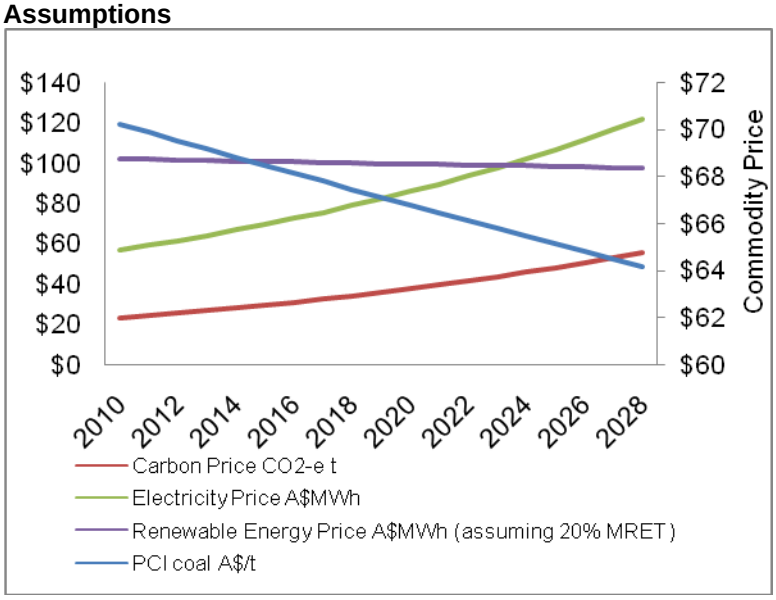

Particulars

- 250 employees excluding contractors
- 3.8 million tonnes produced in 2007
- $6.3 million in scope 1 carbon permit liability in first year plus other scope 2 associated costs – example diesel and electricity
- An average site in terms of 'gassiness' (i.e fugitives) (0.07 emissions per tonne of production) but with limited abatement opportunities

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be approximately $7.50 per tonne produced
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with a 60 per cent administration allocation of permits would see EBITDA increase to $6.20 per tonne produced ($5.00 per tonne produced without free permits)
- The ongoing viability of this site may be compromised as a result of the CPRS and MRET. It cannot be determined if earnings would be sufficient to cover the cost of new plant

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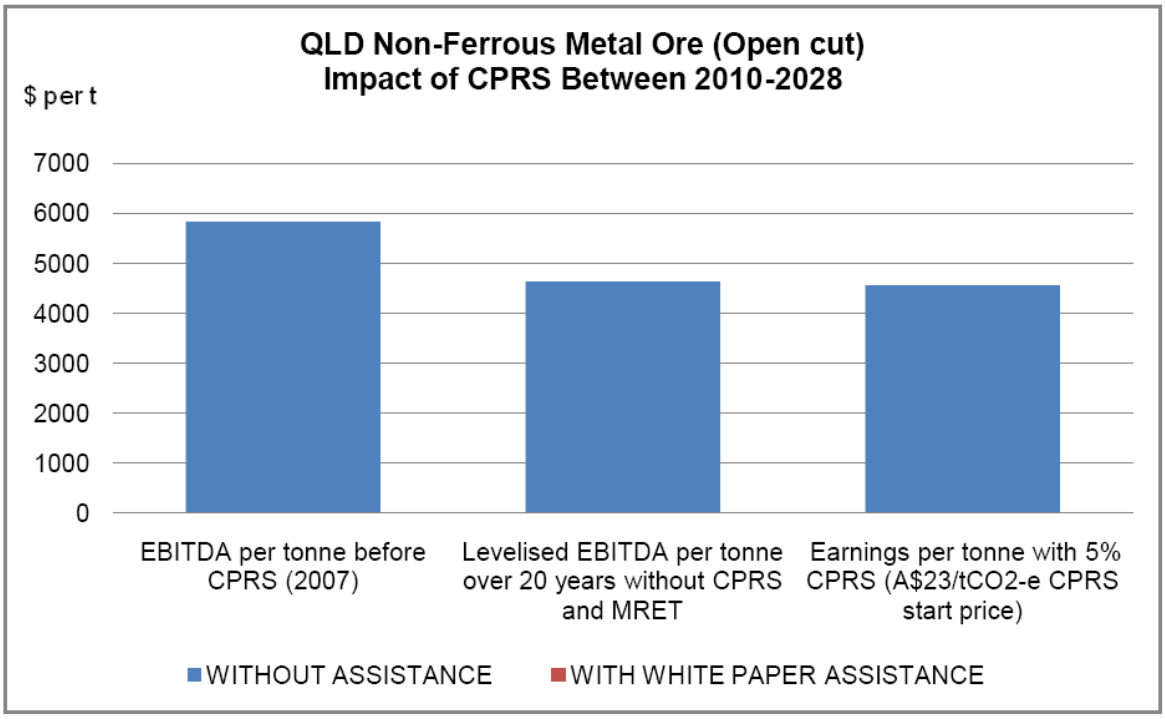
Case Study #9 Results



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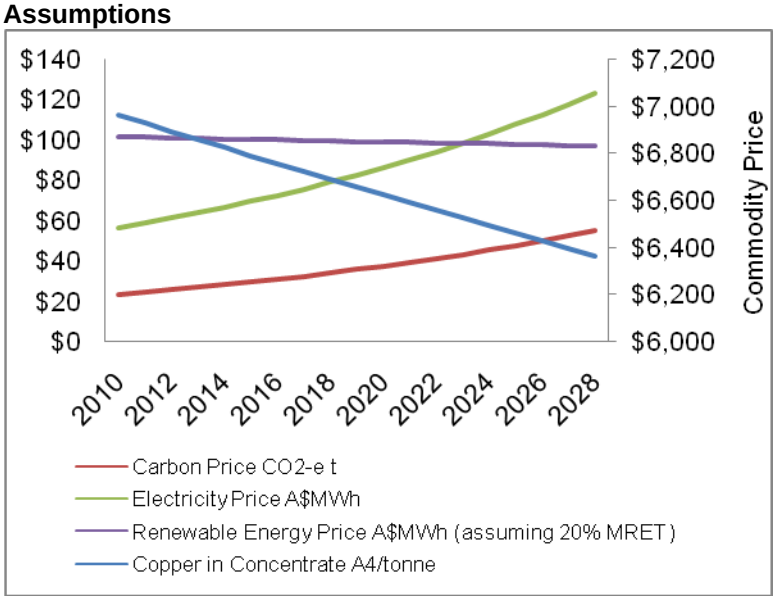


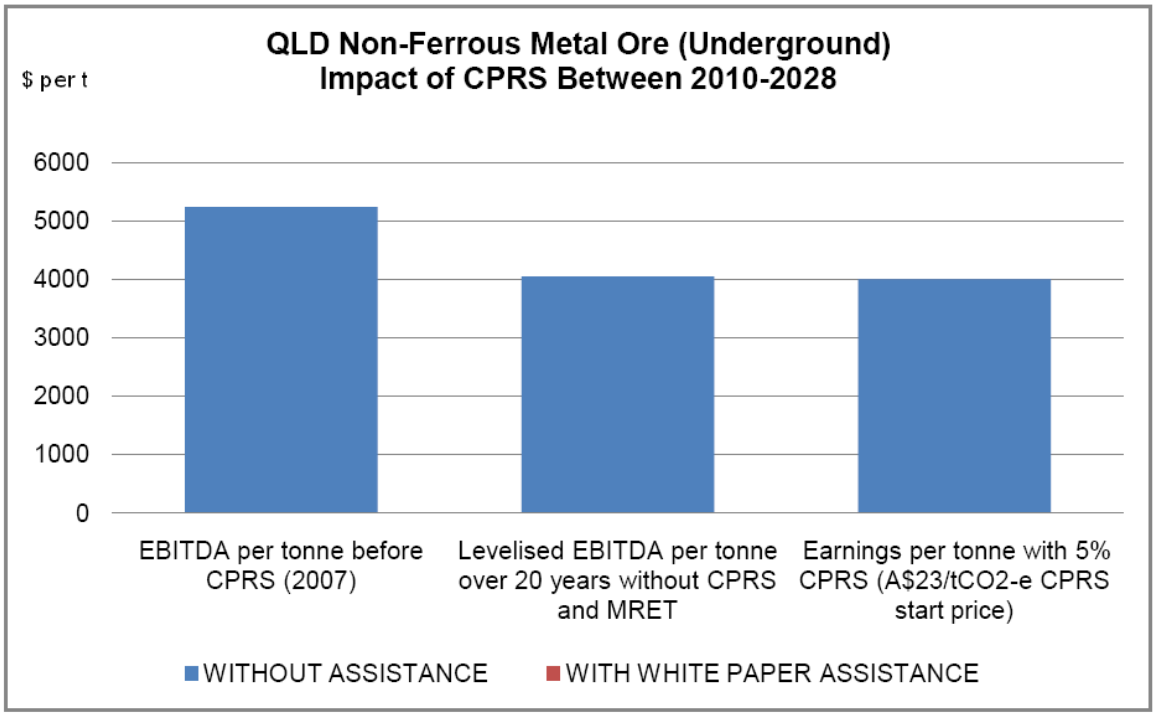
Particulars

- x employees excluding contractors
- 96,000 tonnes produced in 2007
- $2.7 million in scope 1 carbon permit liability in first year (2010) plus significant other associated scope 2 costs – notably electricity and diesel.

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be approximately $5,800 per tonne produced
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with no administration allocation of permits would see EBITDA decrease to $4,565 per tonne produced
- The ongoing viability of this site may not be compromised as a result of the CPRS and MRET. It cannot be determined if earnings would be sufficient to cover the cost of new plant

Case Study #10 Results



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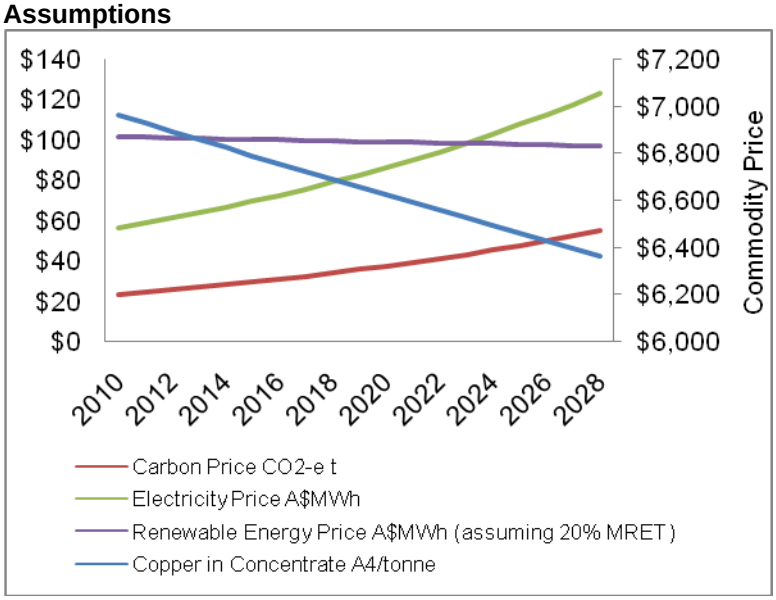

Particulars

- x employees excluding contractors
- 173,000 tonnes produced in 2007
- $276,000 in scope 1 carbon permit liability in first year (2010) plus significant other associated scope 2 costs – notably electricity and diesel.

Key Findings

- EBITDA (levelised between 2010 and 2028) **without** CPRS and MRET would be approximately $4,051 per tonne produced
- EBITDA (levelised between 2010 and 2028) **with** CPRS and MRET and with no administration allocation of permits would see EBITDA decrease to $4,006 per tonne produced
- The ongoing viability of this site may not be compromised as a result of the CPRS and MRET. It cannot be determined if earnings would be sufficient to cover the cost of new plant

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