

Impact of Carbon Pollution Reduction Scheme on the Australian Coal Industry

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QRC – AusIMM Mining 2009

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Part A

- **Asia is Turning to Coal**

Part B

- **Economic Impact of Carbon Pollution Control Scheme on the Australian Coal Industry**

Part C

- **Carbon Solutions
Perenia Carbon**

**Out of Poverty- a report on
Coal’s Contribution to China as a
Model for the Developing World**

Frank Clemente

Senior Professor of Social Science

Timothy Considine

Professor of Natural Resource Economics

Penn State University

“ Every single one of the United Nations’ Millennium Development Goals require access to electricity as a necessary prerequisite”

Global Energy Institute, 2008

“ Electrification in China is a remarkable success story ... it is part of its poverty alleviation campaign”

IEA, 2007

The Energy Driven Sea Change in China

In 1970 China was the world's economic and social backwater:

- **Over 600 million people lacked electricity**
- **The under 5 death rate was 120 per 1,000**
- **Only 1 in 500 people had a telephone**
- **The GDP per capita was \$122**

In just 15 years China provided access to electricity to over 450 million people = 1.5 times the population of the United States.

The Energy Driven Sea Change in China

Utilisation of coal enabled China to double energy output from 1990 to 2005 with coal contributing 65% to the increase.

“China is the largest developing country in the world, and developing the economy and eliminating poverty ...remain the main tasks for the Chinese Government”

State Council of the People's Republic of China, 2007

The Energy Driven Sea Change in China

Coal's socioeconomic track record in China, in the 15 years from 1990 to 2005:

- **Access to electricity increased 76%**
- **GDP increased 300%**
- **Food production index increased 88%**
- **Abject poverty decreased 45%**
- **Infant mortality declined 39%**
- **UN Human Development Index increased 22%**

Despite concerns with global warming Asia is turning to coal

The prevalence of coal-fired power generation in Asia has increased over the past decade as a result of rapid energy demand growth.

This trend is set to continue over the medium to long term with extensive plans for the expansion of coal-fired electricity capacity – around 580gigawatts requiring 5-6 billion tonnes of coal by 2030.

Minerals Council of Australia submission to the Senate Select Committee Inquiry into Climate Change highlighted the economic impact on the coal industry of the proposed CPRS.

- Treasury modelling projects a 33 to 35 percent reduction in forecast coal mining output by 2020 – based on Global initiatives**
- In its first five years alone, the CPRS will cost the Australian coal mining sector \$5billion – whilst none of Australia’s competitors will bear such a cost.**

Black coal industry will incur \$15billion in carbon costs over the first 10 years

- Coal qualifies under EITE threshold of 1330 tCO2/\$million revenue and should not be excluded from \$9 billion in transitional assistance – CCAF \$750 m**
- Fugitive emissions should be excluded from CPRS - as in US and Europe**
- Captured coal mines need to pass through CPRS cost to generators**

Seamus French Anglo Coal Australia CEO appeared before the Senate Select Committee on Climate Policy on 28 April 2009 and said that the CPRS would have a severe impact on Anglo Coal Australia:

“Under the current scheme design, our permit costs alone would be \$118 million per annum. That would have virtually wiped out our average annual profit over the past five years. Put simply, if the CPRS had been introduced five years ago in the present form, Anglo Coal Australia probably wouldn’t exist today.”

Seamus French said that “*the reality is that few abatement options currently exist to abate coal mining greenhouse gasses , and options that might be available will take significant periods to implement.*”

He provided the following timeline at a presentation to the Minerals Council of Australia in June 2009.

B Abatement Options for Anglo

Carbon Source	Reduction Lead time	How ?
Measurement of fugitives	3 years	600 measurement points across all mine sites
Underground rich methane	5 years	20MW expansion of existing power stations \$50-100m
Underground vent air methane	7 years	Installation of 20 voxidisers +\$200m
Fuel	+10 years	No technology to retrofit 300 fleet
Power	+10 years	No technology available
Fugitive open-cut	+10 years	No technology available

Seamus French

Cynthia Carroll Chief Executive of Anglo American stated on 29 September 2009

“In Anglo American alone we risk premature closure by 10 years of two major mines and job losses of more than 2000 people.”

Ms Carroll suggested the Government needed to work with the industry to make key amendments to the proposed CPRS

- 1. Excluding fugitive emissions until there was technology to eliminate them**
- 2. Transitional help, and**
- 3. Help where mines could not pass through the costs of the scheme due to forward contracts**

Xstrata submission to Senate Select Committee on Climate Policy identified four coal operations which will be at risk as a result of the costs associated with the scheme. Xstrata believes that:

“A phased approach to permit auctioning in line with progress on a global agreement offers the best chance for a measured transition that limits carbon leakage and negative economic impact on Australia.”

Xstrata notes that

***“Global coal markets are highly competitive with Australia vying for market share against Indonesia, South Africa, Columbia, Russia and China which are unlikely to introduce a price on carbon in the near future.*”**

In 2005 Indonesia overtook Australia as the world’s largest thermal coal exporter. Indonesia’s market share is growing whilst Australia’s is shrinking. However Indonesian coal is of lower quality which results in higher specific emissions when combusted.”

Peabody Energy and Xstrata Coal are reported to be vying for control of leading Indonesian mining company PT. Berau Coal which produces about 15mtpa.

PT. Armadian Tritunggal is selling its 51% Berau stake in an action expected to net around US\$1billion.

McCloskey Coal Report

The Minerals Council of Australia has stated that the passage of US Climate Legislation through the United States House of Representatives highlights the need for substantial changes to Australia's CPRS including:

- **treatment of the coal industry as Emissions Intensive Trade Exposed, and**
- **adoption of a phased approach to full auctioning of permits.**

The Waxman Markey bill allows for up to 100 percent compensation of all direct and indirect costs to industries that are assessed as EITE, for as long as 70 percent of global output in the relevant sector is produced in countries with similar emissions constraints.

EITE industries will receive up to 100 percent free permit allocation, and will furthermore be compensated for indirect costs such as higher energy prices.

Minerals Council of Australia CEO Mitchell Hooke noted that the key differences between the CPRS and US legislation are:

“Australian industry will face carbon costs from 2011, their US counterparts will not be covered by the scheme until 2014.

The CPRS shielding for EITE industries is partial and inadequate and expires in 2020. US trade exposed firms will receive virtually 100 percent protection until 2025 at the latest.”

Mr Hooke continued:

“The CPRS will cost the Australian coal sector \$A5 billion in the first five years. The US coal mining sector will face no permit costs under the Waxman Markey legislation.”

Mr Hooke endorsed the US legislation

“as a sensible phased approach that will provide real economic incentives to reduce greenhouse gas emissions without putting the economy into reverse.”

- “ The challenge for the Australian Government is to implement a CPRS that is not a tipping point into reverse gear for the Australian coal industry. This can only be achieved by***
- transition to full auctioning of permits aligned with availability of technologies***
 - recognizing coal as ELTE industry competing against countries with no / low carbon costs***
 - exclusion of fugitive emissions from CPRS***
 - pass through captured mines CPRS costs to generators”***

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Perenia Carbon is a joint venture between

- **SMEC – Australia’s Snowy Mountains Engineering Corporation**
- **Pacific Hydro – Australia’s premier renewable energy company**
- **Mitsui & Co., Ltd - one of Japan’s leading trading houses**

Perenia has global coverage and offers clients complete carbon solutions to manage carbon risks, and identify and realize opportunities.

Perenia Carbon Services includes:

- **Carbon Management Solutions**
- **Sustainable Energy Solutions**
- **Clean Development Mechanism (CDM) and Joint Implementation (JI) project registration and optimization**
- **Transaction services for tradeable carbon units including CERs generated by CDM**
- **Project Development and Delivery services for emission reduction projects**
- **Technology identification and assessment**

Perenia Carbon Mitigation Facilities

Lihir geo-thermal project – PNG

- **CDM Registered and operational**
- **55MW – approx 250,000 CERs / annum**

Jorethang Loop Run-of-river Hydro – India

- **CDM Registered and under construction**
- **96MW – 450,000 CERs / annum**

Perenia Carbon Mitigation Facilities

Brazil Wind Power Projects

- **Contracts with over 30 potential projects participating in wind power auctions Nov 09**
- **Could generate over 1M CERs / annum**

San Miguel Bio-Gas Capture and Generation

- **Under contract for CDM Registration (accelerated process)**
- **Approx 50,000 CERs / annum**

Perenia can assist Australian firms under a Carbon Management Plan Framework

- **Undertake CDM project identification within your own operations in developing countries, to enable low cost and internalized offsets to be created.**
- **Manage the carriage of these projects through the registration cycle and assist with project implementation if required.**

Perenia can assist Australian firms under a Carbon Management Plan Framework (cont)

- **Audit Australian operations and ensure that low cost options are fully identified**
- **Measure current emissions and assist with NGERS reporting**
- **Provide services for internal capability building, CPR risk management and opportunity identification**

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