

Australian
Coal Association

A Coal Industry Perspective on Climate Change Policy Post- Election



Japan Clean Coal Day

8 September 2010

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The Australian Coal Industry

- Australia's biggest export - \$55 B in 2008/09
- Japan takes 44% of Australia's coal exports
- Black coal makes a major contribution to Australia's economic prosperity & energy security:
 - 57% of Australia's electricity supply (84% with brown coal)
 - directly employs over 37,000 people and over 100,000 indirectly
 - over \$35 B each year to Australia – sustaining families, communities and small business



Australian Climate Change Policy: Post-Election

- Federal election held 21 August 2010
- No clear winner from two major parties (Labor and Coalition):
 - Prime Minister and Opposition leader both negotiating with Independents to form minority Government
 - Strong swing to Greens Party
 - First Greens candidate elected to the House of Representatives
 - Balance of power likely to be held by Greens in the Senate (Upper House) from July 2011



Australian Climate Change Policy: Labor Policy Platform

- Deferral of CPRS (Emissions Trading Scheme) to 2012-13;
- All new coal-fired power stations must:
 - meet ‘best practice standards’ for carbon emissions; and
 - be “CCS Ready”
- National Low Emissions Coal Council to become “National CCS Council”
- Continued funding of CCS technology and the Global CCS Institute

Australian Climate Change Policy: Coalition Policy Platform

- Will not support a price on carbon or an Emissions Trading Scheme
- “Direct Action Plan”
 - Baseline and credit scheme
 - Emission Reduction Fund: average of \$1.2 billion per year in direct CO₂ emissions reduction activities
 - Funded by a levy on companies which increase their emissions above their baseline.
 - Coal mining will be included and design of the scheme will be key
- Withdraw funding for CCS technology (\$2bn CCS Flagships Program) and abolish Global CCS Institute

Australian Climate Change Policy: Greens Party Policy

Key Policies:

- Australia to reduce its emissions by 40% by 2020
- 30% Renewable Energy Target by 2020
- No new coal-fired power stations, new coal mines or coal mine expansions
- Transfer government support – including R&D – from fossil fuel sectors to energy efficiency and renewable energy. Oppose public funding for CCS.



Election Implications: Climate

Pre-Election

- Political focus had shifted away from climate change:
 - Deferral of the CPRS to 2013
 - Copenhagen: no clear pathway to an international solution
 - Not a major election issue in either the Labor or Coalition campaigns

Back in the policy spotlight?

- Significant 'swing' to the Greens in the election which will hold balance of power in the Senate
- Perception that voters are disappointed with Labor and Coalition parties approach to climate change

Election Implications: Scenario 1

- A **Labor** minority government with Greens/Independent support may mean:
 - Introduction of a 'tougher' CPRS regime, potentially before 2012-13 with the risk of a \$14.5 billion cost to the coal industry (based on current proposal)
 - Policy paralysis on climate change is just as likely
 - There will be pressure to reduce public funding for CCS activities

Election Implications: Scenario 2

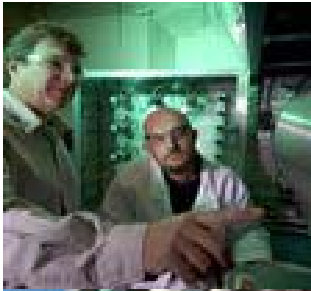
- A **Coalition** minority government with Independent support:
 - Direct Action Plan: inclusion of fugitive emissions from coal mining could pose a risk to the industry
 - Limited funding for CCS could slow technology development

Under either scenario, new funding for CCS technology development is unlikely before 2012–13

Industry Priorities: Climate Change Policy

- The coal industry supports a price on carbon in Australia in conjunction with global action on climate change:
 - Policy must maintain the international competitiveness of the Australian coal industry.
 - Treatment of fugitive emissions from coal mining will be the industry's main concern





Industry Priorities: CCS Technology 2010/13

- CCS technology development: ensure continued Federal and State government funding support for:
 - Continuation of the current demonstration portfolio
 - Completion of a national pre-competitive storage exploration program
 - Assessment of large-scale storage facilities in the Surat Basin in Queensland

CCS Technology Development in Australia: Current Status

- Smaller scale demonstrations progressing, including:
 - Callide Oxyfuel
 - Delta Post Combustion Capture
 - CO2CRC Otway storage trial
- Industrial-scale demonstrations:
 - 4 projects shortlisted under \$1.8bn CCS Flagship Program but all at early stage
 - Gorgon LNG project will commence CO₂ storage operations 2016

Challenges for industrial-scale CCS demonstration by 2015-2020:

1. Significant cost: \$3-4 bn+ per project
2. Availability of government and other funding
3. Storage yet to be identified with any certainty
4. Public awareness and acceptance remains an issue

Summary of Funding Commitments



	Project	Funding Commitment
Queensland	ZeroGen IGCC with CCS	\$46.2m
	Wandoan IGCC with CCS	\$14.3m
	Callide Oxyfuel Project	\$67.9m
	Qld Geostorage Initiative	\$20.0m
	Remainder of IGCC Project Commitment	\$239.5m
New South Wales	Delta PCC Project (Scoping & Delivery)	\$9.4m
	NSW Storage (<i>in-principle only</i>)	\$18.1m
	Remainder of PCC Project Commitment	\$40.6m
National	Australian National Low Emissions Coal R&D	\$75.0m
	CO2CRC and Otway Project	\$2.5m
	NewGenCoal Communications	\$5.0m
	TOTAL :	\$538.5m

Callide Oxyfuel Project

- Retrofit of 30MW_(elect) Pulverised Coal Boiler for Oxygen firing
- Design work completed and Contracts awarded
- Commissioning due September 2011, operating till end 2013
- CO₂ will be processed and liquefied - ready for transport
- Storage options still being assessed
- Project Budget >\$200 million
- **Funders:** Australian Coal Association, Commonwealth Government, CS Energy, J Power, Mitsui, IHI, Schlumberger and Xstrata.



Delta PCC Project

- Retrofit of 100,000 tonnes per year PCC module to PC Boiler
- Feasibility and Approvals Stage underway
- Cost \$28 million to be completed mid 2012
- Construction and Commissioning completed by mid 2015
- Technology provider still to be decided
- Storage options still being assessed
- This Project follows the successful Munmorah Pilot Scale Trial
- **Funders:** Australian Coal Association, Commonwealth Government, New South Wales Government, Delta Electric.



Queensland IGCC+CCS Flagship Project

- ZeroGen and Wandoan propose 400MW (approx) plants
- Both undergoing Pre-feasibility Studies
- ZeroGen would use MHI technology
- Wandoan would use GE technology
- Capture of CO₂ will be at 60% to 90% level
- Both nominated for Flagship Status and Funding (one to be selected)
- Storage will be the priority for the next 2-3 years
- Major funding commitments required if projects are to proceed.

CCS Policy: The Missing Links

- Australian and State Governments and industry have made a significant commitment to CCS to date.
- However, additional action is required urgently if we are to successfully demonstrate CCS at industrial scale before 2020:
 - a pre-competitive storage exploration program, as recommended by the CSTF;
 - finalisation of legislative frameworks for storage;
 - a transitional, market-based mechanism to ‘pull-through’ CCS investment and address operational costs; and
 - a comprehensive national CCS communications strategy.

THANK YOU

The screenshot shows the NewGenCoal website homepage. At the top, there is a navigation menu with links for Home, Issues, Solutions, R&DTV, NewGenCoal Journal, More Information, Media, and About this site. A site search box is located on the right. Below the navigation is the NewGenCoal logo and the tagline "News, views and facts about low-emissions coal technology". The main content area features a large graphic of a globe with a blue and green color scheme, set against a night sky with a full moon. Two main sections are highlighted: "Climate change" with the subtext "Why we need to respond now" and a "CLIMATE CHANGE OVERVIEW" button, and "Carbon capture & storage" with the subtext "Learn about low-emissions coal technology" and a "CARBON CAPTURE & STORAGE OVERVIEW" button. Below this is a "What's New" section with a "R&DTV" tab. It contains several news items, each with a small video thumbnail and a title: "Coal and the current economy" (18 April 2009), "The big picture: renewables and coal" (Featuring interviews with CSIRO scientists and...), "Low-emissions technology" (Focusing on the ZeroGen Project, this video...), "Carbon storage: an overview" (With the CO2CRC's Otway Project as its centre...), "Kevin Rudd launches the Global CCS Institute" (Prime Minister Kevin Rudd officially launches the...), "Callide Oxyfuel Project launch" (Minister for Resources and Energy, Hon. Martin...), and "International collaboration" (Global warming is an international issue...). To the right of the "What's New" section is a text block about the Australian Coal Association (ACA) and its member companies, followed by a "Low-emissions coal and the economy" section with a "Find out more" button. Below that is an "Ask an expert" section with a text input field and a "SUBMIT QUESTION" button. The footer contains the Australian Coal Association logo, copyright information, and links for Media resources, Contact us, Privacy, Disclaimer, and Sitemap.

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NewGenCoal

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Climate change

Why we need to respond now

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Carbon capture & storage

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R&DTV | What's New

Coal and the current economy

18 April 2009

Ralph Hillman, Exec. Director of the ACA, describes the industry's economic contributions and its commitment to a low-carbon future.

[View the video](#)

The big picture: renewables and coal

Featuring interviews with CSIRO scientists and...

Kevin Rudd launches the Global CCS Institute

Prime Minister Kevin Rudd officially launches the...

Low-emissions technology

Focusing on the ZeroGen Project, this video...

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Minister for Resources and Energy, Hon. Martin...

Carbon storage: an overview

With the CO2CRC's Otway Project as its centre...

International collaboration

Global warming is an international issue...

The Australian Coal Association (ACA) and its member companies recognise the urgent need to develop technologies for safe, reliable, low-emissions power generation.

Through the **COAL21 Fund**, the Australian black coal industry has committed over \$1 billion to help develop low-emissions technologies such as **carbon capture and storage**. We believe a new generation of coal technologies will be an essential part of a global response to climate change.

Low-emissions coal and the economy

Coal is Australia's #1 export. Find out about coal's role in creating jobs and income for Australia

[Find out more](#)

Ask an expert

Ask a question related to topics like low-emissions coal technology, coal's role in the Australian economy and the challenge of climate change.

Start typing your question

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