

Australian
Coal Association

Low Emission Coal Technology: Australian Industry Perspective



Australia-Japan Coal Workshop

10 March 2011

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Carbon Capture & Storage: A key technology for Australia

- CCS a strategically important technology for Australia:
 - Over 90% of our electricity from fossil fuels
 - World's largest exporter of coal (\$55B in 2008-09)
 - Set to become a major LNG exporter
- Coal will remain a major part of the Australian energy mix for the foreseeable future - around 43% in 2030 (ABARE)



A Cost-Competitive Technology Option

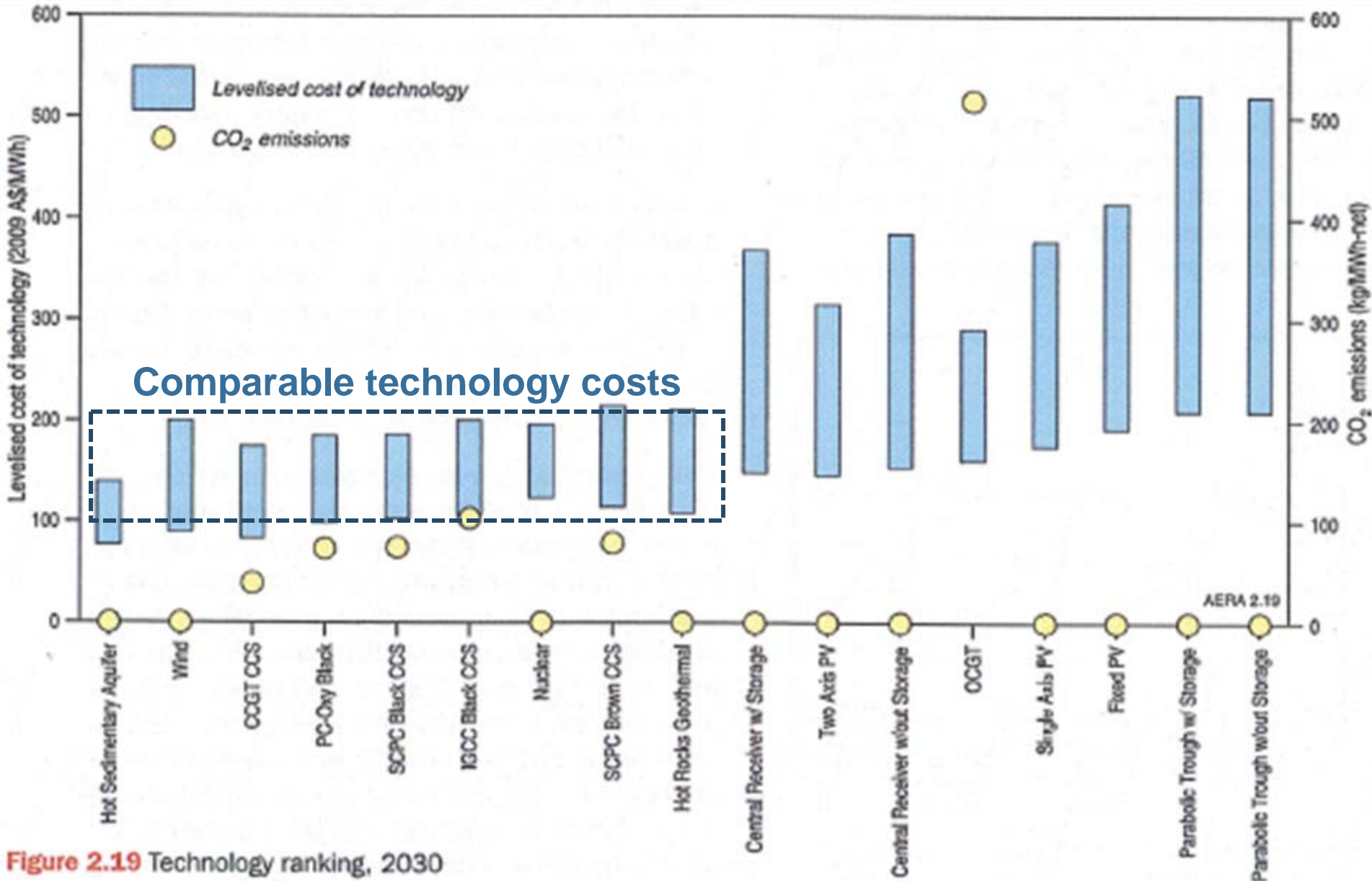
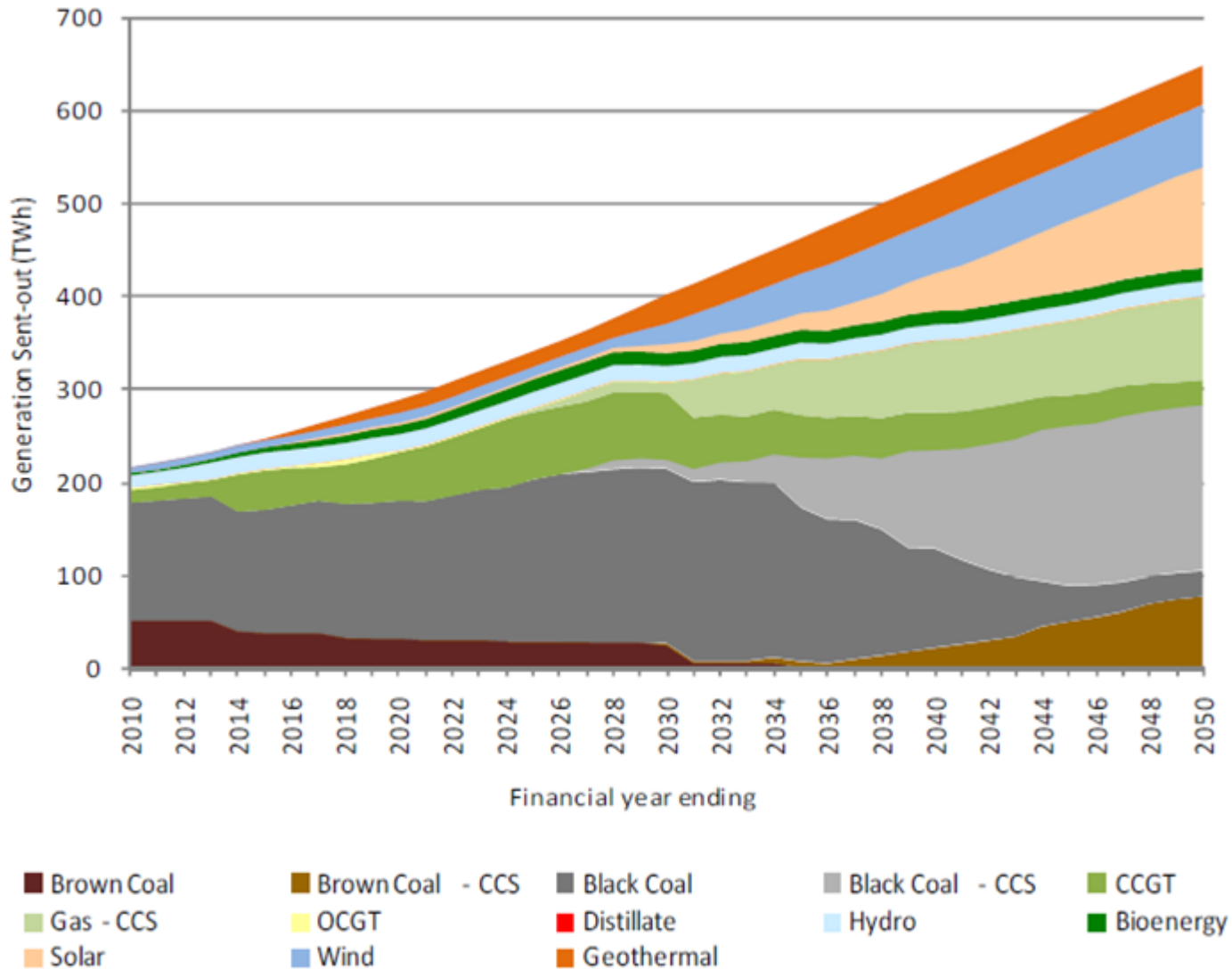


Figure 2.19 Technology ranking, 2030

Source: EPRI technology status data, 2010

A Scenario for CCS Deployment - 2050



Coal Industry Contribution to CCS

- COAL21 National Action Plan launched 2004
- COAL21 Fund established 2006
 - **\$1 billion over 10 years**
 - Black coal producers
 - World-first voluntary fund
- Coal industry participation in:
 - National Low Emissions Coal Council / National CCS Council
 - Carbon Storage Taskforce
 - CO2CRC, ANLEC R&D
 - Global CCS Institute



Summary of Funding Commitments COAL21

(March 2011)



	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</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

CCS Technology Demonstration in Australia: Current Status

- Smaller scale demonstrations progressing, including:
 - Callide Oxyfuel – *due to commence capture operations 2011*
 - Delta Post Combustion Capture
 - CO2CRC Otway storage trial
- Industrial-scale demonstrations:
 - 4 projects shortlisted under \$1.8bn CCS Flagship Program
 - Gorgon LNG project will commence CO₂ storage operations 2016



CCS Flagships: Lessons from 2010

- **Storage is critical**
 - Identification and assessment of storage is key to project deployment timeframes
 - Storage must be the immediate funding priority
- **Project costs are higher**
 - Original project cost estimates of \$3-4 billion for a new build, first-of-a-kind power generation plant with CCS now appear conservative
- **Deployment timeframes are longer**
 - The aspirational 2015 target for a fully-integrated, commercial-scale demonstration now appears unrealistic

Coal Industry Priorities

1. CO₂ Storage Identification and Development
 - Assessment of large-scale storage in the Surat Basin, QLD
 - Completion of a national, pre-competitive storage exploration program
2. Continuation of the current demonstration portfolio;
3. Additional funding for commercial-scale, integrated CCS demonstrations from 2013-15;
 - Including a mechanism to address higher operational costs for these demonstrations competing in the NEM
4. National public education and awareness program; and
5. Finalisation of legislative and regulatory frameworks.



THANK YOU

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News, views and facts about low-emissions coal technology

Climate change

Why we need to respond now

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Carbon capture & storage

Learn about low-emissions coal technology

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R&DTV What's New

Coal and the current economy
10 April 2009
Ralph Wilson, Exec. Director of the ACA, describes the industry's economic contributors and its commitment to a low-carbon future.
[View the video](#)

The big picture: renewables and coal
Featuring interviews with CSIRO scientists and...

Low-emissions technology
Focusing on the ZeroGen Project, the 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...

Celtide Dryfuel Project Launch
Minister for Resources and Energy, Hon. Martin...

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

Check Australia's #1 expert. 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.

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