



Australian Government

Department of Resources, Energy and Tourism

Australia-Japan Coal Technology Workshop

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Brisbane-Australia

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Welcome and Workshop Overview



- Australia sells almost half its coal to Japan, Japan buys 60% of its coal from Australia.
 - Workshop to address the two major challenges to energy security
 - Update from Australia on transport infrastructure and resources development
 - Progress in developing and deploying the technology to address greenhouse.
 - Primary focus of Workshop
 - review work being done in Australia and Japan on low emissions coal technology including carbon capture and storage
 - progress opportunities for future cooperation.
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Australian Government Climate Change Policy Developments

- Kyoto Protocol: Australia ratified in 2007
- Committed to greenhouse reduction targets
 - Kyoto: 108% of 2000 levels
 - Medium term: at least 5-15% reduction by 2020
 - Long term: 60% below 2000 levels by 2050
- Comprehensive package of domestic initiatives:
 - Carbon Pollution Reduction Scheme
 - Renewable Energy Target
 - National Low Emission Coal Fund - \$500 million
 - Renewable Energy Fund - \$500 million
 - Energy Innovation Fund - \$150 million
 - Clean Energy Efficiency Fund – \$ 4.5 billion
- Global Carbon Capture and Storage Initiative
- New measures complement and build on existing measures and link in with initiatives from industry (eg Coal 21 Fund) and state governments (eg Victoria's ETIS Program).





Outcomes of CCS Initiatives

- World leading work on geological storage assessment and storage legislation
 - CS Energy oxy-fuel – world first retrofit – Joint project with Japan
 - Otway pilot CO₂ storage project
 - Post Combustion Capture (PCC) pilot projects – Munmorah, Tarong, Loy Yang in Australia and Gaobeidian in China
 - Proposed 100,000-300,000 tpa PCC plants in Victoria and NSW
 - Proposed coal gasification research centre in Qld.
 - Two Proposed IGCC plus CCS demonstration projects (ZeroGen and Wandoan)
 - Lignite Integrated Drying and Coal Gasification (IDGCC) 500MW
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Australia-Japan Coal Technology Cooperation

Current major projects include:

- CSIRO and JCoal Enhanced Coal Bed Methane CO₂ Storage Project – includes pilot storage projects in Japan, Australia, China and possibly Korea
 - Industry from Australia and Japan with Government support is undertaking the world's first retrofit of oxyfuel combustion at Callide A power station in Australia - an APP Flagship Project
 - Universities are cooperating on gas separation technologies associated with capturing CO₂
 - MHI and ZeroGen have recently signed an MOU to support Japanese participation in proposed ZeroGen IGCC+CCS coal power station project in Queensland
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CONCLUSIONS

- Coal will continue to play an important role both economically and as an energy source both in Australia and the wider world.
- However, concerted national and international effort is needed to develop and deploy low emission technologies involving CCS.
- The Australian Government is addressing these challenges through a range of initiatives at the national and international level.
- These initiatives provide a foundation for cooperation between Australia and Japan that can make real contributions to the development and commercial deployment of CCS.