

Skills Development For the Future Victorian Brown Coal Industry

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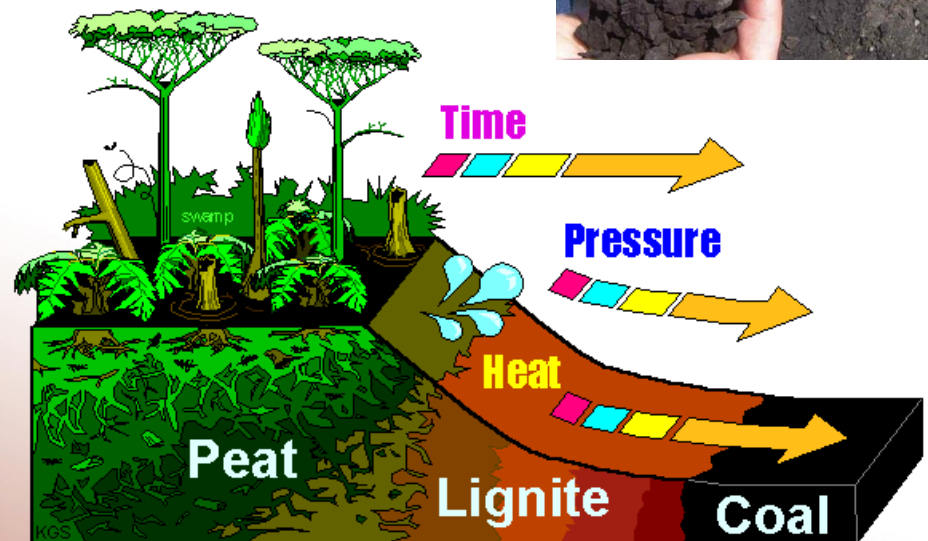
Outline

- Setting the scene
 - Issues, Challenges and Opportunities for utilisation of brown coal
- Planning for future eventualities
 - Current programs and activities
- Future workforce needs
 - Our approach to advancing this topic
- Opportunities and implications
 - The next steps



Brown Coal – what is it?

- Young coal
 - not hard, black and shiny, but soft, brown and wet!
- 60% Water -> lower efficiency burning
- Weight / flammability
 - Uneconomic to transport
- Current use primarily local
 - Electricity generation
 - Soil additives
 - Briquettes



Brown Coal - issues

- High water content (lower efficiency)
- Old power station design (lower efficiency)
- Low cost (reduced drive for efficiency)
- 90%+ of electricity generation in Victoria
- SECV breakup – no longer a single point of focus
- Uncertainty in investment climate - GFC + carbon tax **debate**
- CO2 emissions controls coming
- Lobby groups



Uncertainty over the future of Brown Coal / Latrobe valley

- “Hundreds of coal jobs on the line”
 - Herald Sun, July 11
- “Canberra calls for tenders for brown coal generator buyouts”
 - AAP 30 September
- “Little coal comfort for Latrobe Valley locals”
 - The Australian, 16 June
- “Coal power struggle is a really messy business”
 - The Age, 24 September
- “Coal-fired plant faces funding threat”
 - The Age, October 10
- “'Cloud' over SA power stations”
 - The Australian, 23 March

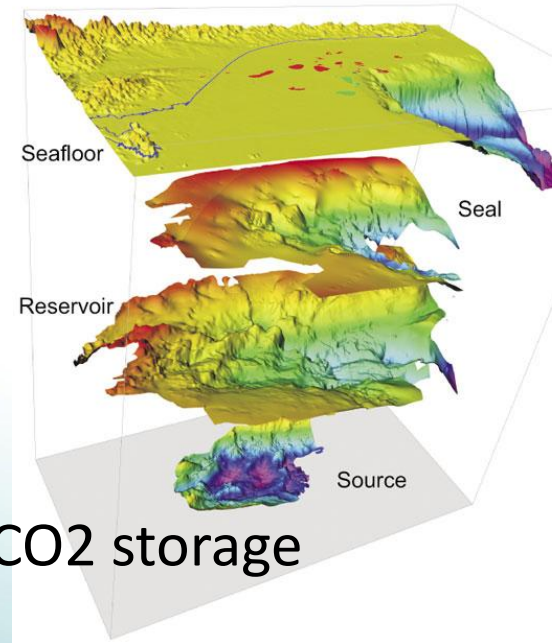
Herald Sun

 **THE AUSTRALIAN**

THE  **AGE**

Latrobe Valley Brown Coal – the Opportunities

- Vast reserves
 - Australia has 25% of global brown coal
 - >540 years of accessible, economically recoverable coal
- Low cost
 - Close to surface
 - Thick seams
- Cost stable (not traded globally)
- Coal can be used as a raw material
 - Coal to Gas, Liquids, Fertilisers, Chemicals, etc etc
- Gippsland and Otway basins prospective for CO₂ storage



How does BCIA deliver a Brighter Future?

- Private, not-for-profit, member-based company
- Focus on a **sustainable** future for Australia's Brown Coal
- ~\$21M funding secured from Governments, Members
- Programs to improve efficiency, reduce CO2 emissions, reduce costs of deployment
 - Research and Development (Grants and commissioned activities)
 - **Skills programs for future applications of brown coal**
 - Networks and linkages to bring together expertise and delivery
 - Communication of benefits of Brown Coal
- Focus on early stage and pilot R&D
 - issues and technologies 5-20 years out
 - Higher risk tolerance than commercial entity



Rationale for Skills Projects

- Sustainable development of the Brown Coal industry requires strong research, professional and technical capability
- New ways of using coal will change the required skills mix – ***looking to the future in 2020 and beyond***
- Current skills mix may not be sufficient to support future technological and commercial innovations .

BCIA Investments in Research Skills

- Budget of over \$2M for next four years
- Research Fellows
 - Alan Chaffee
 - Klaus Hein
- Research scholarships
 - 5 students 2010-
 - Further students on BCIA funded projects
 - 2+ new studentships per year
- Networks and linkages



Challenges defining future skills requirements

- Uncertain environment
 - History of major projects cancelled or put on hold
- No clear technology winners
- Multitude of stakeholders
- Local community with mixed engagement
- Multitude of planning processes –
 - Brown Coal Roadmap, Community Development plans etc
 - Future brown coal industry skills not addressed



BCIA Skills workshop, Traralgon

- Bring together relevant stakeholders
- Understand issues and requirements for **future** skills and workforce needs
- Develop a plan of action for what is required
- Identify where BCIA and others can assist



Participation

Over 80 stakeholders contacted to inform the workshop process.

Some 30 stakeholders participated, representing:

- Mining, engineering and power stations
- Representatives the higher education sector (University and TAFE)
- Private training providers
- Research organisations
- Governmental bodies (Commonwealth, State, Regional and Local Government)
- Non-government organisations

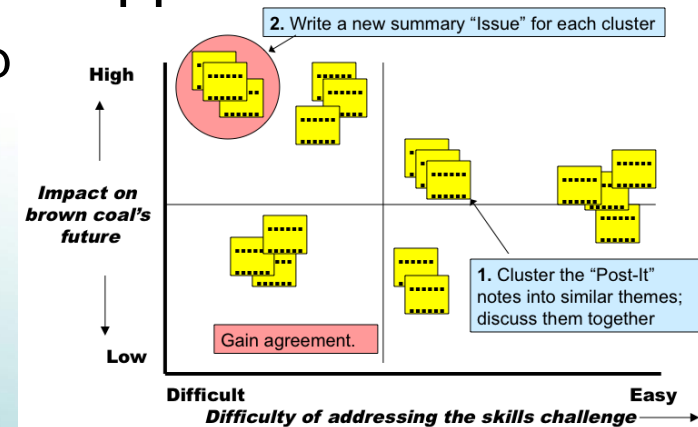
Pre-workshop themes

1. Ensuring the Sustainability of the Brown Coal Industry
2. Skilling and training necessary for the industry to achieve a sustainable future
3. Achieving the right mix of professional development and skills training
4. Facilitating collaborative effort



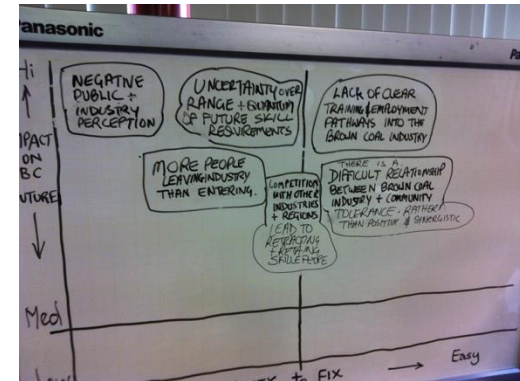
Participative Workshop process

- Brainstorming as two teams in separate rooms:
 - “Buzz groups” of 3 people
 - Everyone has opportunity to communicate
 - Contribution required from every “buzz group”
 - “No holds barred” during the conversations
- Agreement on the key challenges and opportunities:
 - Summarising and prioritising as a group



Key Issues identified in workshop

- Negative perception of brown coal
- Uncertainty over the range and quantum of future skill requirements.
- No integrated model exists to support current and future skills development.
- Relationship between the brown coal industry and the local community is characterised by tolerance rather than synergy.
- Low retention rates in school system that leads to poor articulation into skilled and specialised positions in the local area.
- Difficulties in attracting and retaining specialised skills and more people are leaving the industry than are joining it.
- An aging workforce, leading to a loss of experience and expertise.



Example opportunities

- Survey to identify skills and workforce needs for a sustainable Brown Coal industry.
- Link the industry in the Latrobe Valley to international initiatives in skills development for the innovative use of the Brown Coal resource.
- Facilitate better working relationships between the industry and the education and training sector, and community.
- Assist in developing pathways to increase the pool of local young people by promoting entry level training.
- Improve the perception of the Brown Coal industry with governments, communities and educators and trainers.



Next steps from workshop

- Refine and consider outcomes
- Feedback results to the stakeholders
- Secure commitment for an ongoing working group
- Working group sessions to develop, communicate and refine action plan
- Identify and secure funding and partner organisations

Learnings, Opportunities, challenges and implications

- Need to involve all relevant stakeholders, but still have a workable group
- A skills audit is a necessary step to identify the skills requirements for different scenarios
- This is an area not well addressed by current skills activities
- Need to look outside brown coal to other initiatives
- Need to learn from similar communities elsewhere

- The future **will** be different from today, we need to look forward not back!

Conclusions

- Setting the scene
 - Issues, Challenges and Opportunities
- Planning for the future
 - Current programs and activities
- Future workforce needs
 - Our approach to determining this
- Opportunities and implications
 - The next steps



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- The workshop stakeholder group



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