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
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
Acknowledgements

- Environmental Management Services (Peter Waterman and Peter Henderson)
- John Burgess
- Mandy Frostick
- The workshop stakeholder group
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