

---

# A Few Final Thoughts...

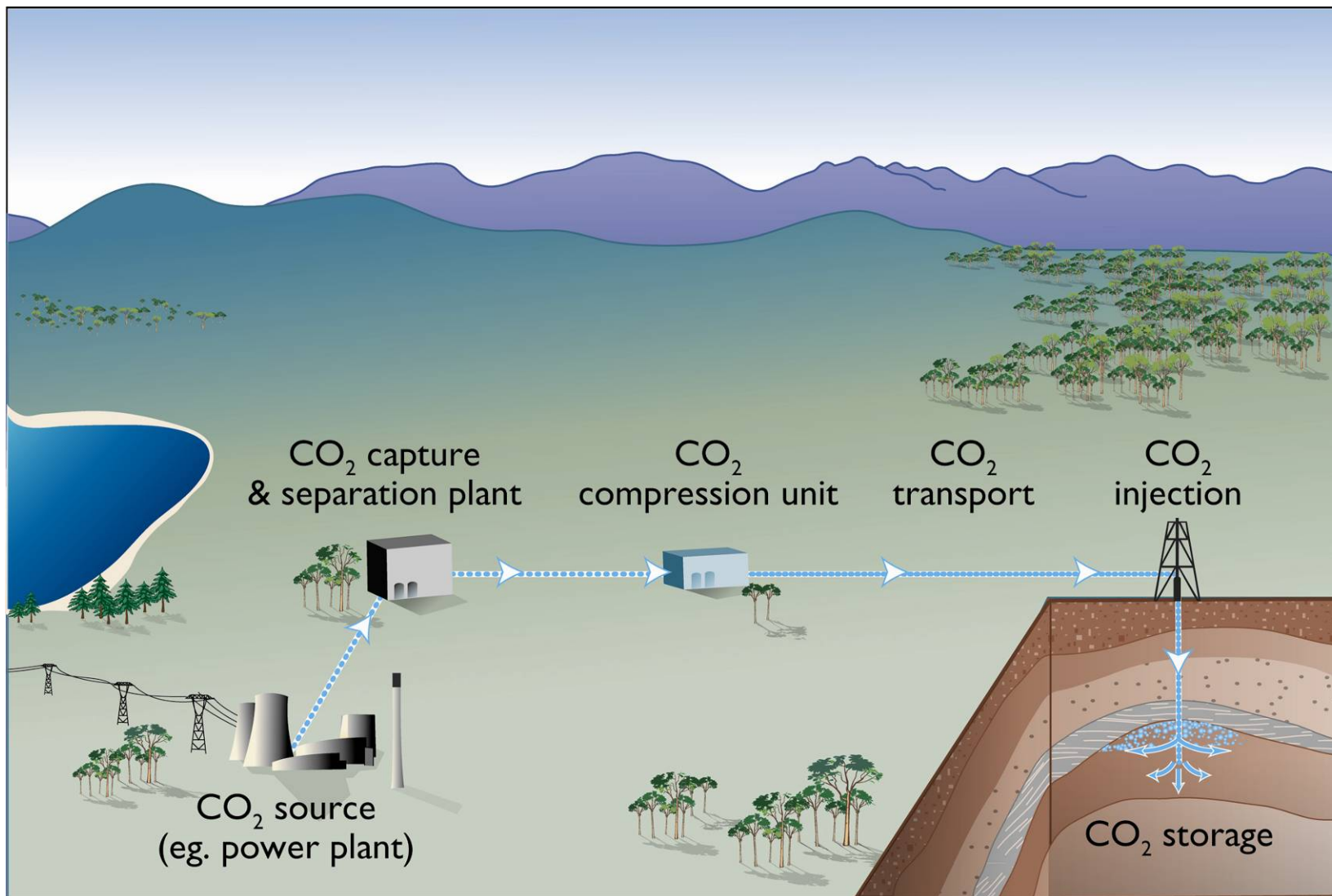
## Challenges & Opportunities in a Carbon Constrained World

# Carbon Constrained World: a Resource Industry-style Business Model?

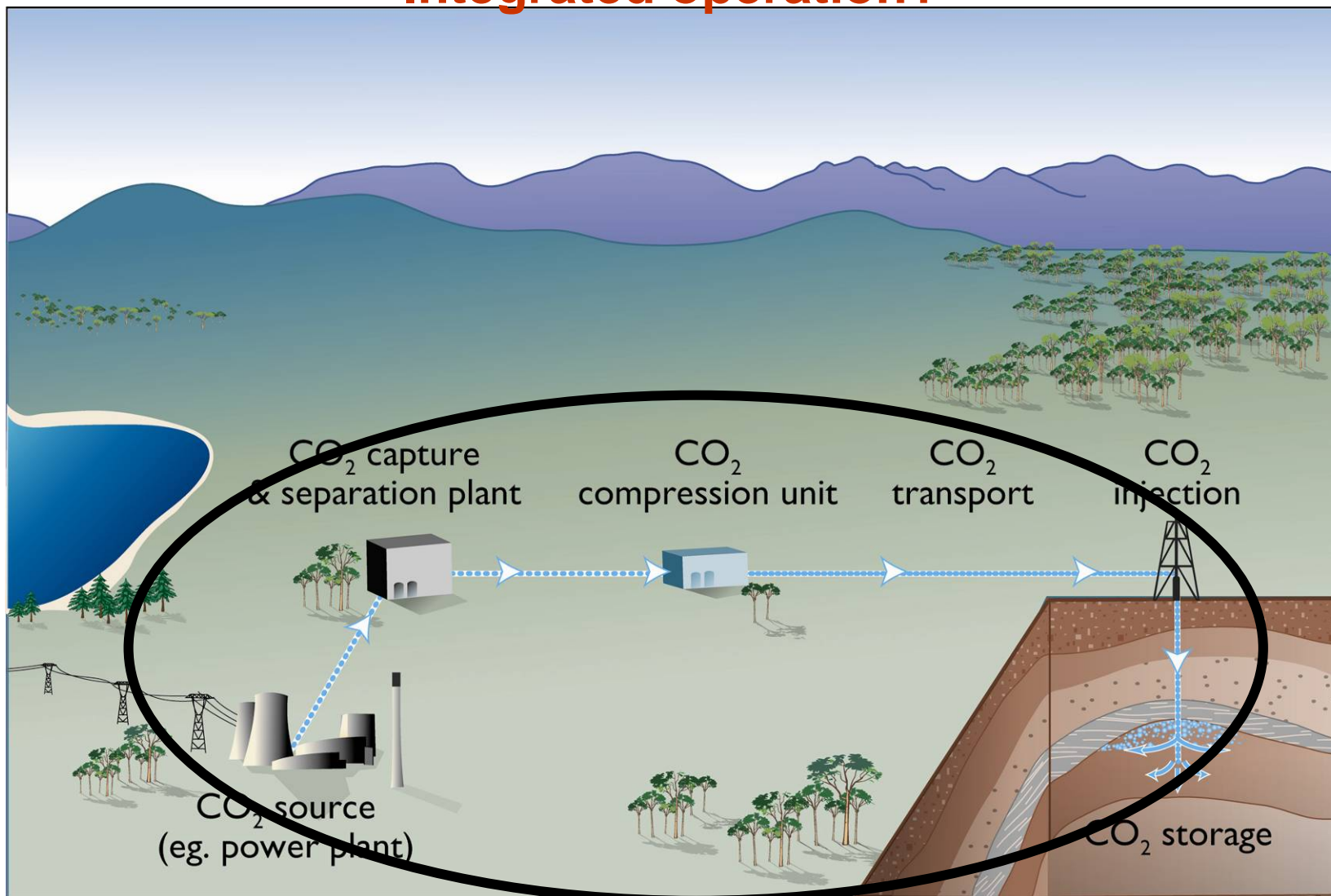


- Exploration (plays, prospects)
- Permitting (acreage release)
- Reserves-style certification
- Unitization / equity determination
- Development (infrastructure...\$\$)
- Regulatory regimes
- Legal / liability issues

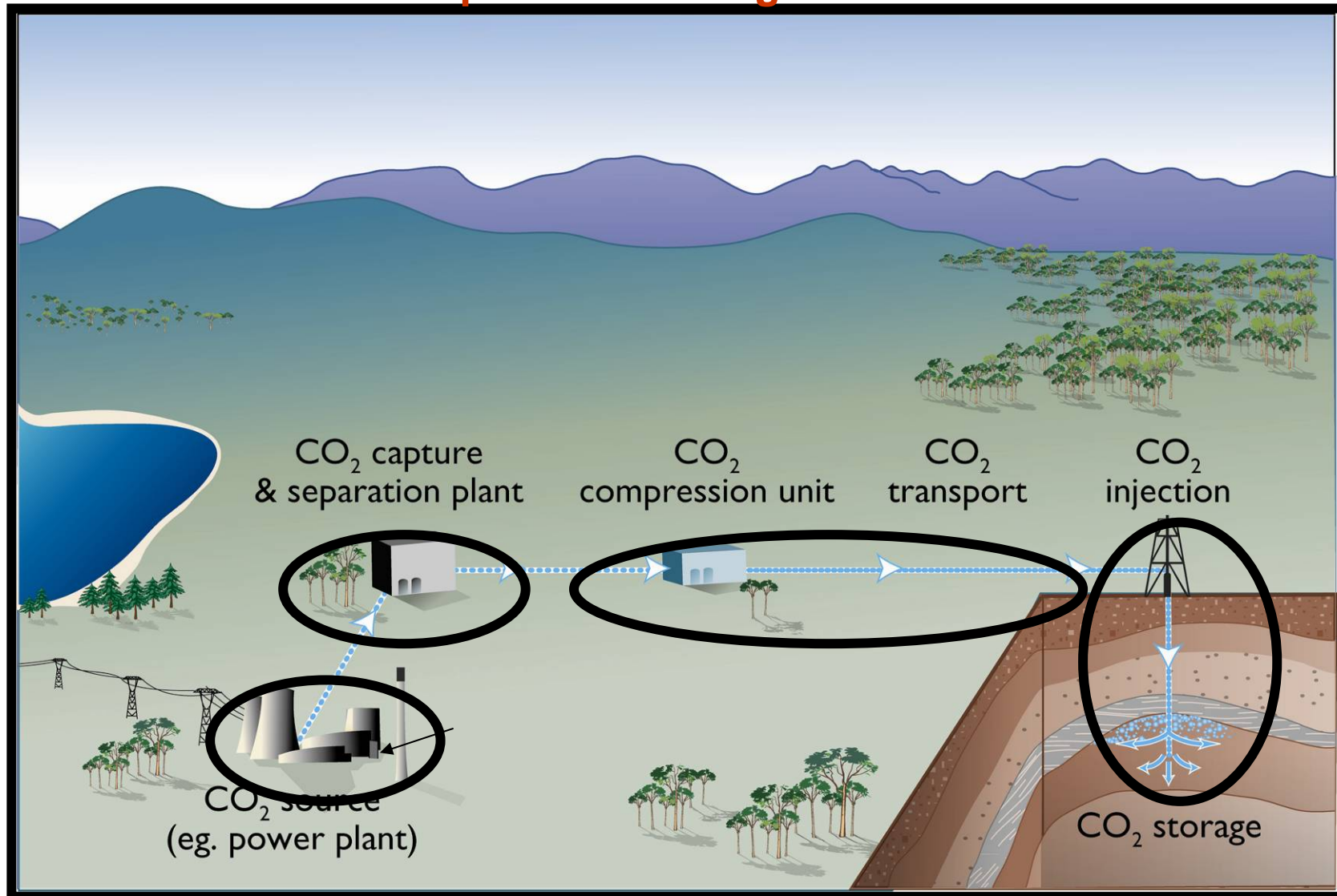
## What is the business model for taking CCS forward?



## Integrated operation?

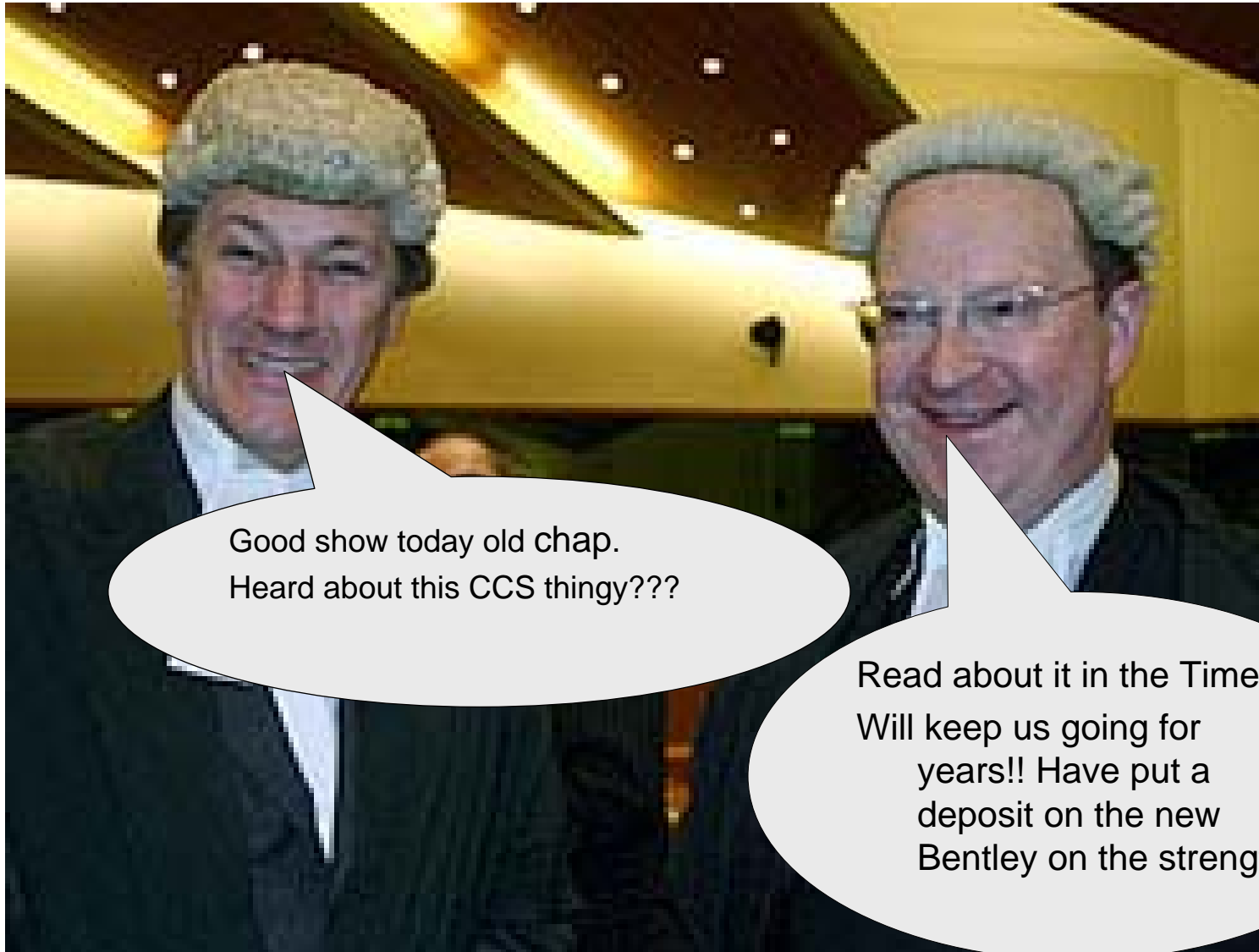


## Or different providers along the value chain?



© CO2CRC

## Overheard outside court.....



Good show today old chap.  
Heard about this CCS thingy???

Read about it in the Times..  
Will keep us going for  
years!! Have put a  
deposit on the new  
Bentley on the strength

# Carbon Constrained World: a New Economic Sector Business Model?



***“Australia has the opportunity to play a leadership role in funding and co-ordinating a major global effort to develop and deploy carbon capture and storage technologies, and to transfer those technologies to developing countries,”***  
**Prof. Ross Garnaut, 04 July, 2008**

# Carbon Constrained World

- **An Environmental Necessity**
- **A Socio-political Reality**
- **A Business Challenge or Opportunity?:**
  - **Carbon Price / Emissions Trading:**  
**Not “if” ....but “when” ....& “how much”!**
  - **Many questions still to consider:**

# What is the likely impact of carbon trading on CCS?

---

---

*ETS alone will not drive the deployment of CCS -because of cost... But CCS has to be part of carbon trading, given that it is likely to be one of the major components of mitigation.*



# What is the role of Government in supporting early deployment of CCS?

*It is essential that we accelerate the deployment of CCS, but the early movers will be hard hit by high costs. Therefore governments will need to help financially with “pioneers”, but obviously CCS has to be able to compete with other mitigation options*



# How does the Kyoto Protocol impact on CCS – and visa versa?

*Easy- it doesn't at present!  
However it is expected that CCS  
will be part of the post -Kyoto  
scheme and the Clean  
Development Mechanism*

# How would we monitor and verify CCS?

*It is probably easier to monitor and verify CCS than carbon sequestered in plants; the Otway project will test M&V under Australian conditions; Ketzin under European conditions*

# Conclusions

- Addressing climate change concerns will require a range of mitigation measures, including greater energy efficiency, more renewables, lower carbon fuels and CCS –there is no single answer
- But we are likely to continue to use fossil fuels, so we need to do it in cleaner and smarter ways, and CCS is the only option that we have at present for doing this
- CCS demonstration projects eg Otway and Ketzin will provide us with confidence that CCS is technically feasible, and will accelerate commercial deployment
- Commercial deployment of CCS will foster an industry equal in size or larger than the present oil and gas industry
- CCS will require skills in engineering, geoscience, economics, legal areas and will offer broad career opportunities



**Thank you**



**For more information go to**

**[www.co2crc.com.au](http://www.co2crc.com.au)**