The Business Case for Early Action

BACKGROUND: The Australian Business Roundtable on Climate Change

- The Australian Business Roundtable on Climate Change was formed in 2004 by six of Australia’s largest businesses from a cross-section of industries. Its aim is to advance understanding of the business risks and opportunities associated with climate change and to work co-operatively on solutions to the issue.

- BP, Insurance Australia Group, Origin Energy, Swiss Re, Visy Industries and Westpac formed the Roundtable together with the Australian Conservation Foundation.

- Climate change threatens Australia’s economy. Uncertainty about future climate policy heightens the risks associated with investment. Greenhouse gas emissions will become a financial liability in many companies’ balance sheets.

- The Roundtable commissioned CSIRO to quantify the impacts of climate change on the Australia. Allen Consulting Group provided economic modelling which detailed the cost to Australia to substantially reduce greenhouse gas emissions as part of an international response and the comparative costs of early and delayed action.

ROUNDTABLE RECOMMENDATIONS

Business and governments should work together to frame policies on three fronts to create the necessary investment conditions to reduce emissions while maintaining economic growth.

1. Design a ‘long, loud and legal’ framework to establish a carbon price signal:
   - Set a long-term aspirational goal to significantly reduce emissions.
   - Set a short-term binding target as a milestone.
   - Introduce a national market-based carbon pricing mechanism
   - Announce that government will not provide indemnity against future carbon risk.
   - Accelerate efforts to manage energy and reduce emissions.
2. **Encourage innovation and investment in emerging and breakthrough technologies:**
   - Expand fiscal incentives to encourage emerging and breakthrough technologies for power generation and transport.
   - Build modelling capacity to estimate the full economic cost of climate change.
   - Create a stronger science and technology culture to underpin R&D innovation.

3. **Build national resilience to the impacts of climate change:**
   - Develop, fund and implement a national strategy to build resilience and reduce vulnerability to climate impacts.

### RESEARCH FINDINGS

**CSIRO Research**
- Average global temperatures are projected to increase by between 1.4 and 5.8°C by 2100 (relative to 1990).
- Reducing global greenhouse gas emissions will reduce the rate and magnitude of climate change.
- A 60% or greater reduction in developed countries' greenhouse gas emissions by 2050, as part of an international response, would prevent some of the worst-case scenarios of climate change in Australia.

**Australian Government Projections**
- By 2020 emissions are set to increase by 22% from 543Mt to 664Mt. Projections include:
  - Stationary energy sector emissions to rise to 170% of 1990 levels by 2020.
  - Transport emissions to rise to 159% of 1990 levels by 2020.
  - Agricultural emissions to rise to 116% of 1990 levels by 2020.
- To achieve deep cuts in greenhouse gas emissions, national emissions must stabilise and then fall over coming decades.
- There is no international agreement to limit greenhouse gas emissions beyond 2012.

### Impacts of Climate Change on Industry:

**Tourism**
- The tourism industry will be at risk as climate change wreaks havoc with major tourist destinations such as the Great Barrier Reef, Kakadu National Park and the Australian Alps.
- A 2-3°C rise in average global temperature could see 97% of the Great Barrier Reef bleached. The Great Barrier Reef alone supports a $1.5 billion industry.
- With a 2-3°C increase in average global temperature 80% of the freshwater wetlands of Kakadu would disappear.
A 1°C rise in average global temperature would reduce snow cover in the ski fields by up to 60%, placing about half of Australia’s $550 million ski industry at risk.

**Water and Primary Industries**

- Pasture growth would slow by 31% with 2-3°C increase in average global temperature and livestock carrying capacity may fall by up to 40% on native pasture systems.
- A 1-2°C increase in average global temperature could reduce water flows in the Murray Darling Basin, and to Melbourne, by about 15%.
- Warmer seas would cause ocean fisheries yields to fall and place the $260 million western rock lobster harvest at risk.
- Changed rainfall and more bushfires would affect forestry production.

**Infrastructure and Insurance**

- Increases of >4°C in average global temperatures could lead to increases of between 9 and 25% in peak electricity demand in Adelaide, Brisbane and Melbourne.
- Insurance losses would surge as one-in-100-year weather events occur more frequently.
- Risks to property, life and health, and the risk of legal liabilities will grow as victims of catastrophic events seek compensation from those considered responsible
- 19 out of the 20 largest property insurance losses since 1967 have been weather-related.
- The 1999 Sydney hailstorm cost $2 billion.
- A 25% increase in wind speed beyond 50 knots will see insured losses increase by up to 650%.
- Double the number of people would be exposed to flooding in Australia and New Zealand with a >1°C increase in average global temperature.

**Allen Consulting Research**

**Economic Impact - Early Action**

- GDP grows at an average of 2.1% pa to 2050, compared to 2.2% pa with no additional action.
- By 2050 GDP would reach $2 trillion;
- Employment would grow by 38.7% over the period of 2050 leading to the creation of 3.5 million jobs by 2050.
- Electricity costs would be lower as business invests earlier in low and zero emission technologies, when compared to taking delayed action. Future electricity price rises would be three times higher in the delayed action scenario in comparison with the early action scenario.

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Economic Impact - Delayed Action

- Costs would be substantially greater and concentrated over a much shorter period leading to a major disruptive shock to the Australian economy, compared to 2.2% pa with no additional action.
- GDP growth would be limited to an average of 1.9% pa to 2050, or $1.84 trillion.
- Employment growth would be 36.2% - 250,000 fewer jobs created than under early action.
- More expensive low- and zero-emissions technologies are required on an accelerated basis.

RESEARCH METHODOLOGIES

CSIRO Methodology

- CSIRO collated existing international and Australian climate change impacts work to assess the benefits of a significant reduction in greenhouse gas emissions.
- The research analyses paths forward that would avoid dangerous climate change.

Allen Consulting Group Methodology

- Two scenarios were tested against a ‘base case’ of continuing along the current path specifically:
  - Early action to commence in 2013 and delayed action to commence nine years later in 2022. Both scenarios aimed to achieve a cumulative reduction of greenhouse gas emissions of 13 billion tonnes of CO₂.

Base case

- Australia and the world undertake no additional measures from 2005 to reduce greenhouse gas emissions. Emissions would grow just below 1% per year, reaching an increase of approximately 80% above 2000 levels by 2050. This a reference case only, it does not factor in the economic impacts of climate change on Australian industry and is an unlikely international or domestic response.

Early action

- Australia acts with other developed countries to emit 60% less greenhouse gases in 2050 than they did in 2000 by introducing a carbon signal in 2013. Developing countries commence abatement action from 2030.

Delayed action

- Delayed action assumes that the carbon signal will be delayed until 2022. Similar to the early action scenario, developed countries act from 2022 and developing countries act from 2030.

Note: The Allen Consulting Group modelling work does not consider the economic benefits of cutting emissions, or the economic costs of unrestrained climate change, it looks only at the cost-effectiveness of cutting emissions.