

# Submission to Garnaut Climate Change Review

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## Table of Contents

1	Executive summary.....	2
2	Role of forests in addressing climate change .....	3
2.1	Forest and climate change research.....	3
2.2	Observations .....	3
2.3	Recommendations .....	4
3	Reshaping Australia's economy to low carbon emissions .....	5
3.1	Recommendations .....	5
4	Lower transport emissions .....	7
4.1	Recommendations .....	7
5	Conclusion.....	7

# 1 Executive summary

This submission covers the role of forests in addressing climate change, reshaping Australia's economy to low carbon emissions and opportunities to lower transport-related greenhouse gas emissions.

Landclearing (also referred to as "deforestation") produces over 10% of Australia's greenhouse gas emissions according to Australia's official reporting to the UN Climate Secretariat. Native forests are indisputably a very large store of CO<sub>2</sub> with considerable potential for additional sequestration, and are also currently a source of considerable greenhouse gas emissions, primarily resulting from logging.

Science based carbon estimation and accounting should be applied to all native forest logging activities and a market-derived price should be applied to carbon emissions resulting. Consideration should be given for a five-year moratorium on logging Australian native forests as an immediate step in reducing Australia's greenhouse gas emissions.

Australia should adopt world-leading policies on forest protection as a measure for addressing climate change and to demonstrate and provide an example to developing nations that remaining native forests can be protected globally without adverse economic impacts.

Australia should increase the current emission reduction target of 60% by 2050 to 90% by 2050 and set mid-term and short-term emission reduction target for 2010, 2012, 2015 and 2020. In addition, all government subsidies for fossil fuel-based industries and products should be removed.

Shifting Australia to a competitive low carbon economy can be achieved by establish "feed in tariffs" for clean energy generation, broadening and strengthening housing and appliance energy standards and rating systems, increase the MRET in Australia to 30% by 2020 and provide government funding for the development of zero emission energy production including solar and wind. In addition, a national strategy and framework is required for realising emission reduction standards in conjunction with the States and Territories including a moratorium on the building of any new coal-fired power stations.

Transport-related emission can be addressed by abolishing fringe benefit tax concessions for car use, providing additional Federal funding annually for public transport, establishing a national working group for the promotion and implementing sustainable and low emission transport solutions, including public transport, low emission vehicles and cycling. In addition carbon emission accounting should be mandatory for the construction and operation of all transport-related projects including roads, freeways and tunnels.

## 2 Role of forests in addressing climate change

Landclearing (also referred to as “deforestation”) produces over 10% of Australia’s greenhouse gas emissions according to Australia’s official reporting to the UN Climate Secretariat.

The role of forests in sequestering carbon and action as carbon stores has been well documented by scientific studies both in Australia and overseas.

### 2.1 Forest and climate change research.

Local scientific research papers include:

**Growth Modelling Of Eucalyptus regnans for Carbon Accounting at the Landscape Scale**

Christopher Dean, Stephen Roxburgh and Brendan Mackey, 2003  
CRC for Greenhouse Accounting, ANU.

**Assessing the carbon sequestration potential of managed forests: a case study from temperate Australia**

S. H. Roxburgh, S. W. Wood, B. G. Mackey, G. Woldendorp, P. Gibbons (2006), Journal of Applied Ecology Volume 43 Issue 6 Page 1149-1159, December 2006.

In addition, the **Stern Review (The Economics of Climate Change, October 2006)** found that:

*“emissions from deforestation are very significant – they are estimated to represent more than 18% of global emissions, a share greater than is produced by the global transport sector.”*

*“A substantial body of evidence suggests that action to prevent further deforestation would be relatively cheap compared with other types of mitigation, if the right policies and institutional structures are put in place.*

*Preserving forests has the co-benefit of protecting a significant proportion of the world’s biodiversity that they contain.”*

*“Curbing deforestation is a highly cost-effective way of reducing greenhouse gas emissions.”*

### 2.2 Observations

Native forests are indisputably a very large store of CO<sub>2</sub> with considerable potential for additional sequestration, and are also currently a source of considerable greenhouse gas emissions, primarily resulting from logging. Deforestation by logging releases up to 1400 tonnes of carbon per hectare.

Carbon accounting is not currently applied to native forest logging activities in Australia and no carbon price is applied.

Native forests (not including conservation forests) sequester at least 57 Mt CO<sub>2</sub> per annum. This effectively reduces Australia's total emissions by 10% when full-carbon accounting is applied.

Native forest logging results in greenhouse gas emissions estimated at 38 Mt CO<sub>2</sub> per annum which is equivalent to 7% of Australia's total emissions.

Once native forest is clear felled, it will take up to several centuries to recapture all the CO<sub>2</sub> emitted resulting from the deforestation.

Less than 5% of CO<sub>2</sub> generated by native forest logging is sequestered in durable wood products; 58% is lost on-site and as waste; 23% is exported as woodchips; and 11% is added to landfill.

Tasmania, Victoria and South East New South Wales account for the majority of Australia's emissions from native forest logging (Over 30 Mt CO<sub>2</sub> per annum).

Full-carbon accounting (rather than the partial accounting required by the Kyoto Protocol) is likely to be used in global post-Kyoto arrangements which will mean that sequestration and emissions from native forests will be counted.

Protecting native forests is one of the quickest and easiest ways to reduce Australia's greenhouse gas emissions, with the added benefits of protecting biodiversity and conserving water.

## **2.3 Recommendations**

- Science-based carbon estimation and accounting to be applied to all native forest logging activities.
- A market-derived price to be applied to carbon emissions resulting from all native forest logging activities.
- Consideration to be given for a five year moratorium on logging Australian native forests as an immediate step in reducing Australia's greenhouse gas emissions.
- Australia to adopt world-leading policies on forest protection as a measure for addressing climate change and to demonstrate and provide an example to developing nations that remaining native forests can be protected globally without adverse economic impacts.
- Further research into the role of Australia forests in carbon capture and sequestration is required to augment and build upon previous studies.

### **3 Reshaping Australia's economy to low carbon emissions**

Recent scientific studies by the Intergovernmental Panel on Climate Change (IPCC), NASA and the CSIRO indicate that global warming is occurring more rapidly than worst-case scientific predictions so that urgent action on reducing carbon emissions is required. In Australia this is evident via greatly reduced rainfall patterns and temperature increases.

Rigorous and enforceable targets for emission reductions are required as policy settings for driving a shift in Australia to a low carbon economy. Setting near term, mid term and long term targets for emission reductions will provide motivation for industry restructure towards low emission technology, which will in turn encourage a growing export market for low emission technology and products both regionally and globally.

Renewable energy industry and associated companies are growing rapidly where ambitious emission reduction target have been set in places such as Europe (Spain and Germany in particular) and in California.

In Europe in 2007 renewable energy industry investments increased to \$45b and the sector employed approximately 500,000 people while the coal industry employed about 30,000.

On current trends renewable energy is predicted to be cost competitive with coal by 2015.

#### **3.1 Recommendations**

- Increase the current Australian emission reduction target of 60% by 2050 to 90% by 2050 in line with latest scientific models.
- Set a binding target for Australian emission increases to peak by 2015 then decline.
- Establish a mid term Australian emission reduction target of 30% by 2020.
- Set Australian emission reduction targets for 2010, 2012 and 2015 on a trajectory that will realise 2020 and 2050 targets.
- Remove government subsidies for fossil fuel-based industries and products.
- Establish a feed in tariff for clean energy generation at a rate of 4 times the price of coal and gas based energy generation.
- Introduce 6 star energy standard for all new housing and renovations covering energy and water utilisation, passive solar design and building envelope characteristics.
- Increase the MRET in Australia to 30% by 2020 in line with current targets set in Germany and California.

- Introduce energy rating standard for all domestic and commercial appliances including consumer goods such as televisions and computers.
- Provide government funding for the development of zero emission energy production including solar and wind.
- Establish a national strategy and framework for realising emission reduction standards in conjunction with the States and Territories including a moratorium on the building of any new coal-fired power stations.

## 4 Lower transport emissions

Transport is a major source of greenhouse pollution – and this is exacerbated by the inefficiencies and tax incentives within Australia's transport system.

34% of household emissions are associated with personal transport, including commuting, shopping and recreation (**Global Warming Cool It**, Australian Government, 2007).

14% of national emissions come from the transport sector (**Australian National Greenhouse Gas Inventory 2005**).

No federal funding is provided for any significant public transport projects in Australia.

Urban rail transport is 8 times more energy efficient than private car use for transport. Rail freight is 4 times more energy efficient than road freight. Shifting passenger and freight transport to rail would make a significant contribution to reducing Australia's transport-related carbon emissions.

Many state governments regard cycling as a recreational activity rather than as a serious mode of urban transport.

### 4.1 Recommendations

- Abolish fringe benefit tax concessions for car use
- Provide \$1 billion of additional Federal funding annually for public transport systems, to be matched by State funding for projects, similar to arrangements in place for road network funding.
- Establish a national working group for the promotion and implementation of sustainable and low emission transport solutions, including public transport, low emission vehicles and cycling.
- Conduct carbon emission accounting for the construction and operation of all transport-related projects including roads, freeways and tunnels.

## 5 Conclusion

Thankyou for the opportunity to make this submission and for your attention to it.