



The Secretary of the Committee,
Parliament of Australia
House of Representatives
PO Box 6021
Parliament House
CANBERRA

Submission No: 56

**SUBMISSION TO HOUSE STANDING COMMITTEE ON INDUSTRY
AND RESOURCES**

**Inquiry into the development of the non-fossil fuel energy industry in Australia:
Case study into selected renewable energy sectors.**

The current state of the renewable energy sectors could be categorised as either :-

Emerging – These technologies are still under development and have yet to be proven in significant commercial applications ie Solar Concentrators, Solar Towers, Wave, Tidal & Hot Rocks Geothermal.

Or -

Commercial – These technologies are technically mature and are being applied around the world where they are commercially viable ie Hydro, Solar Photovoltaics, Solar Hot Water Heating, Wind & Bioenergy.

Hydrogen is **not** an energy source. It is like a carrier of energy. It can be derived from from chemical reactions, fossil fuels and renewable sources. Its application is still in the research and development phase.

It would seem that the prospects for economically viable electricity generation are in the commercial group listed above. Since its introduction in 2001 the MRET scheme has tested this commercially and the result has been that most of the RECs created do date have come from Hydro repowering, Solar Hot Water Heating, Wind and Bioenergy sources.

The 2003 Tambling Review (*Appendix 1*) of the MRET Scheme recommended a modest increase to the MRET target and included economic modelling of this higher target. The prediction was that over 40% of future RECs would be created in the wind sector. This shows that the wind sector has the scale to deliver a significant proportion of renewable electricity generation at an economically viable price when the cost of greenhouse gas emissions is taken into account.



Recently I have heard Federal Government ministers regularly saying that to overcome the intermittency of wind power we need to develop electricity storage systems. This is a myth (See *Appendix 2, Wind Energy – The Myths and the Facts, Sustainability Victoria*). In 2003 the Australian Greenhouse Office commissioned a report titled – National Wind Power Study (*Appendix 3*). The report said that “the NEM could readily accept 8000MW of wind farms” without significant changes to the existing systems. This is about 25% of the current installed capacity. Currently Denmark sources 20% of its power from wind without storage systems and Europe plans to source 12% of its power from wind by 2020.

This is a large amount of green power generation that could be brought online much sooner than other electricity generating methods. The construction time for a wind farm is about two years. According to the Australian Wind Energy Association web site (www.auswind.org) there are proposals for 6785MW of wind farms in Australia. As an example of what can be done Germany installed 12,000MW of wind capacity between 2001 and 2005.

The Tambling Review of the MRET Scheme said that “MRET had contributed significantly to additional renewable energy generation”. It is unfortunate that the Federal Government’s 2004 White Paper on Energy did not extend the MRET Scheme as recommended by the Tambling Review. This has stalled renewable energy projects that relied on the scheme for them to be competitive with the fossil fuel electricity generators and did not resolve the uncertainty for all electricity generators.

Although both the Federal Government and the Labor Party have announced support for an emissions trading scheme the timetable to implementation is 3-5 years away. Detailed analysis in the recently released United Nations IPCC report emphasises the need for early action to stabilise global greenhouse gas emissions to avert dangerous climate change and concludes that the cost of containing climate change is vastly less than the costs of continued inaction. The UK Stern Review from last year came to the same conclusion.

There are six wind farms already approved in NSW. These are not proceeding at present as they rely on mechanisms like the MRET Scheme to bridge the cost gap in competing with fossil fuel generators when there is no cost put on their pollution.

Global wind energy capacity is growing at about 24% per annum at present. By early 2007 there was 817MW of capacity installed in Australia. By comparison USA installed 11,000MW, India 6,000MW and China 1,700MW (with a recently announced target of 20% reduction of energy consumption per unit of GDP by 2010).



Each of these countries has indigenous wind turbine manufacturing facilities. Australia is lagging behind in the uptake of wind energy and missing out on the benefits. Even New Zealand has a local wind turbine manufacturer and since the curtailment of the MRET Scheme the only wind turbine assembly factory in Australia has closed.

The MRET Scheme has proven to be an effective market based approach for renewable energy generators. It should be extended and a higher target set now as it will be some time before any emissions trading scheme has any real effect.

The solution to our greenhouse gas emissions problem will be a mix of many different technologies that will change over time. We should use the current proven technologies we have now like wind energy while we are developing other emerging renewable and low emission technologies. Wind energy can make a significant contribution to our energy needs now with the right support mechanisms.

Mark Waring
Director
15th June 2007

Attachments:

APPENDIX 1

Mandatory Renewable Energy Target Review – A Review of the Operation of the *Renewable Energy (Electricity) Act 2000*
Australian Greenhouse Office, Commonwealth of Australia, September 2003

APPENDIX 2

Wind Energy: The Myths and the Facts
Sustainability Victoria, October 2006

APPENDIX 3

National Wind Power Study –
An estimate of readily accepted wind energy in the National Electricity Market
Australian Greenhouse Office, Commonwealth of Australia, 2003