



Friday, June 29, 2007

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

The Western Australian Sustainable Energy Association Inc (WASEA) welcomes the opportunity to comment on the current *Inquiry into the development of the non-fossil fuel energy industry in Australia: case study into selected renewable energy sectors*.

WASEA is recognised as the peak body for the sustainable energy industry in Western Australia and works on behalf of members to ensure that the Government acts in a sustainable way, is committed to reducing greenhouse gas emissions, and is actively adopting practical measures to adapt to climate change. Our membership represents community groups, individuals and organisations and WASEA currently represents over 80 members.

Climate change is an issue which requires immediate action from the community, industry and government. The world's nations have relied on fossil fuels to meet ever increasing energy demands and we are now suffering the environmental consequences of the emissions of those carbon-based energy sources. Australia and the world cannot afford to wait any longer to start taking action against climate change and looking for alternative low and zero emissions energy sources.

Energy, like water, has always been cheap in Australia, but with growing reliance on imported fuels we are increasing our exposure to reduced security of supply and international pricing. Australians must be prepared to be more efficient with carbon-based energy, just as we are now addressing a similar issue with water. We are in the fortunate position to have renewable energy solutions available now and that can be built today. It is also clear that the technologies required to deliver low or zero emissions from existing fossil fuel reserves are not immediately available for commercial use.

WASEA works on behalf of all members to ensure that the State and Federal Governments adhere to sustainability principals, and are committed to mitigating greenhouse gas emissions through the deployment of sustainable energy solutions and adopting practical measures to adapt to climate change.

Recent international reports clearly demonstrated the economic impact of failing to move from a carbon based economy. For example, the Stern Review highlighted that the economic impact of not taking action now will result in:

- Extreme weather which could reduce global gross domestic product (GDP) by up to 1%
- A 2 -3 °C rise in temperatures which could reduce global economic output by 3%
- If temperatures rise by 5 °C, up to 10% of global output could be lost. The poorest countries would lose more than 10% of their output
- The worst case scenario global consumption per head would fall 20%

The Intergovernmental Panel on Climate Change (IPCC) Report in contrast highlighted the environmental impact of no action and found that:

- Rainfall may fall as much as 20%
- Continuing global trend that there will be more warm days than cold days
- Global warming caused by carbon emissions increased 20% in the last 10 years, the fastest in at least 500 years.
- Average global temperatures will increase by 0.2 °C in each of the next two decades

A number of studies have been undertaken by organisations within the sustainable energy industry which clearly demonstrate that it is possible to use a combination of renewable energy and energy efficiency to reduce energy use. For example, the Australian Ministerial Council on Energy identified ways to reduce energy consumption and greenhouse gas emissions by 20%-30% with the adoption of commercially available technologies with an average payback time of four years. In addition, The Clean Energy Future Group has provided conclusive research that Australia's energy needs can be met through the use of renewable energy, energy efficiency and high efficient gas.¹

Establishing a significant renewable energy industry in Australia requires support from Government in the following ways:

- the implementation of an emissions trading scheme, where the polluter pays for carbon emissions including targets for Australia that reduce greenhouse gas emissions by 60% by 2050 compared to 1990 levels; and
- the strengthening of the mandated renewable energy target.

Australia has the renewable energy technologies and expertise available now. For example in Western Australia:

- The SWIS is able to achieve 20% wind energy penetration with through simple measures²
- Wind diesel systems in regional areas, such as Esperance that are delivering over 95% of the system demands from wind energy at one time without system issues.

¹ See: www.wwf.org.au/ourwork/climatechange/cleanenergyfuture

² See: 'Maximising the penetration of intermittent generation in the SWIS' [Econnect Project No: 1465 29/07/2005]


- Renewable energy power stations in diverse regional areas assist with reducing transmission losses in the system.
- Significant opportunities for geothermal energy, which can provide reliable baseload power. Geoscience Australia suggests there is enough contained heat to supply Australia's currently electricity needs for 22,000 years within the first 5kms of the continent.
- Recent monitoring of tidal power off the coast of Western Australia show this to be an emerging energy source.

Renewable energy is greenhouse neutral and can meet Australia's current and future energy needs. In addition to environmental benefits, renewable energy also has the following benefits:

- Additional employment opportunities in regional areas
- Stimulates regional economies
- Investment in regional electricity networks
- Agricultural waste can be used as renewable energy

WASEA looks forward to working with the Government in creating a sustainable energy future. If you require further information about this submission, please do not hesitate to contact Johanna Gastevich on (08) 9328 8411 or johanna@wasea.com.au

Yours sincerely



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Chair
Western Australian Sustainable Energy Association Inc (WASEA)