Submission No: 132

Sustainability Victoria

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

Background

- The Victorian Government is positioning Victoria's economy for a lower carbon future and has set a target to reduce Victoria's greenhouse gas emissions by 60% by 2050 over 2000 levels. Sustainability Victoria is the agency responsible for helping Victorians to act now on climate change.
- Achieving reductions in greenhouse gas emissions will require action in many sectors by communities, government and industry. The Government has implemented a suite of initiatives to work with these sectors to reduce emissions. It has also implemented the Victorian Renewable Energy Target, which requires retailers and wholesale purchasers of electricity to contribute towards a renewable energy target of an additional 3,274 GWh of renewable energy generation by 2016.
- The Intergovernmental Panel on Climate Change in its most recent report warned that "warming of the climate system is unequivocal" and noted that "most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations".
- The UK Government-commissioned *Stern Review on the Economic Impacts of Climate Change* concluded that climate change threatens to be the greatest and widest-ranging market failure ever seen and that the benefits of strong, early action on climate change outweigh the costs.

Issues

- The increased uptake of renewable energy technologies will be an essential component of the strategy to reduce greenhouse gas emissions.
- Each of the renewable energy sectors targeted by the Inquiry (solar, wave, tidal, geothermal, wind, bioenergy and hydrogen) have different characteristics in terms of scale, maturity, cost and dispatchability. Some of the sectors are commercially mature, while others are still at pre-commercial or demonstration stages. Hydrogen is a fuel which can provide a clean energy pathway but it must be derived from renewable energy sources to provide significant greenhouse benefits.
- Australia is well endowed with many renewable energy resources, most notably solar, wind, geothermal and wave energy. Victoria in particular has abundant wind, solar and potentially, geothermal resources. A wide range of renewable energy technologies will need to be pursued to maximise abatement opportunities and address needs across different sectors. For example some renewable energy applications will supply power to the

electricity network (for example wind), while others will supply energy to households or businesses (solar hot water and solar photovoltaics).

- A study by McLennan Magasanik Associates commissioned by the Renewable Generators Association of Australia examined the role of renewable energy in Australia's future energy mix. The study concluded that while most renewable energy technologies are more expensive than fossil fuel generation, these costs are falling over time. The study also noted that the introduction of a carbon pricing mechanism or a requirement for new generation to meet strict emissions limits will deliver this price convergence sooner.
- A national emissions trading regime would attach a price to carbon and therefore provide an incentive for the deployment of renewable energy systems. This would accelerate the development of the renewable energy sector in Australia and provide a driver for further R&D and investment in this sector.