



THE UNIVERSITY OF
MELBOURNE

26 September 2011

To whom it may concern,

In August this year, I was invited give a presentation at the Macedon Ranges Sustainability Group Annual General Meeting. I gave an overview of the latest scientific information on climate change, including a summary of the IPCC 4th Assessment Report, in which I was a lead author, and outlined the likely future climate scenarios, given recent measurements from a range of sources.

With 32 national academies of science around the world all saying that it is very likely that human activity has adversely affected our climate through global warming, it is not surprising that there is considerable effort globally, and in Australia, attempting to better understand climate change impacts and to reduce emissions of greenhouse gases from human activity.

From various local, national and international reports, a climate outlook for the Macedon Ranges can be developed. Projected changes that will affect Macedon Ranges include:

- *Temperature changes*: By 2030, a temperature increase of between 0.4°C and 2°C is predicted. This will result in the average number of days over 35°C increasing from 8 now to 9-12 by 2030 and 10-20 by 2070.
- *Rainfall*: Projected changes in rainfall are more uncertain, particularly in summer, with substantial year-to-year variations. Overall, in most of Victoria, including the Macedon Ranges' area, rainfall is likely to decrease in winter and spring, with annual decreases of up to 11% by 2030 and 30% by 2070. The seasonality of rainfall is also likely to change.

Temperature increases, reduced annual rainfall, increased frequency and intensity of droughts and heat waves, combined with peak oil, will have a significant impact on rural communities with a high dependence on agriculture and food and wine tourism.

Scientists and communities acknowledge that climate change has the capacity to dramatically alter life as we know it – affecting the viability of regions, shifting our patterns of food supply, reducing rain-fed water supplies and impacting many of the ecosystems and natural icons that we value and rely upon.

Across Australia, there are local groups being established to support their communities to respond to the impacts and opportunities presented by climate change. The Macedon Ranges Sustainability Group and the energy project team WISE are examples of this community response.

These groups typically aim to help communities:

- Adapt to the challenges of climate change and peak oil
- Significantly reduce our greenhouse gas emissions
- Reduce our ecological footprint
- Reduce our reliance on non-renewable sources of energy
- Secure a local food supply and promote sustainable agricultural practices

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The ultimate solutions to climate change are workable, cost-effective technologies that permit society to improve living standards while limiting and adapting to changes in the climate. The WISE wind project, like other community renewable projects, provides a constrained yet commercial scale development that maximises community benefits and helps produce behaviour and attitudinal change.

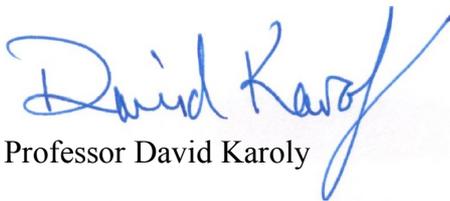
Unfortunately, scientific, engineering and organizational solutions are not enough. Societies must be motivated and empowered to adopt the needed changes. For that, the public must be able to interpret and respond to often bewildering scientific, technological, and economic information and then identify the natural, social and intellectual capital available. Communities that engage and consult broadly are best placed to identify projects that tap into local assets and meet local expectations.

In the Macedon Ranges, wind is an obvious resource for energy generation that avoids the transmission losses and CO₂ emissions from brown coal used for electricity generation in the Latrobe Valley.

The recent changes to government planning guidelines, which remove local community control, must be seen as a backward step in tackling climate change. In my opinion, the State Government has introduced over-reaching regulations (VC82) which restrict the development of renewable energy and remove the scope for local projects which enjoy strong community support. No-go zones should be determined locally and any mandatory set backs should be based on scientific standards. All governments everywhere need to work with their local communities to build further renewable energy capability. Arbitrary restrictions will not get us there.

I support a review of the current guidelines with a view to providing special consideration for small scale community renewable energy projects. I wish WISE and MRSG well in their efforts in this area.

Yours Sincerely,

A handwritten signature in blue ink that reads "David Karoly". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Professor David Karoly