

To: Kevin.Rudd.MP@aph.gov.au
From: george blahusiak <georgebl@iprimus.com.au>
Subject: Blueprint for Climate Change
Cc:
Bcc:
Attached:

Mr Kevin Rudd
Member for Griffith

Dear Mr Rudd

The recent blueprint on climate change from Kim Beazley prompts me to write to you.

The blueprint, with its emphasis on solar and other renewable forms of energy, shows a remarkable shallowness of thought coupled with a terrible lack of foresight. In some respects it may even be incorrect, leading to Australia becoming a backwater, the poor white trash of Asia I believe someone once said.

Let me start with some basics, because it is clear from the current debate that there is a vast lack of understanding of the problems associated with solar and other forms of renewable energy.

The solar constant, the energy the Earth receives from the Sun, the figure we all live by, is 8.37 joules (2 small calories) per square centimeter at the nominal distance of the Earth from the Sun. Due to atmospheric absorption the amount reaching the ground at normal incidence, that is, when the Sun is directly overhead, is only 5.86 joules (1.4 small calories) per square centimeter. This figure is available in almost every high school science book.

As anyone, even a Labor politician, would well know, the Sun isn't directly overhead at all times. It rises and sets. It move higher and lower as the seasons pass. It is obscured by clouds much of the time. Yes, even in Australia. And it is 'behind' the Earth for fully half the day (on average).

The average amount of solar energy per square metre received in Perth is nominally only 5 kilowatt-hours per day, instead of the more grandly claimed figure of 24 kw-hrs, or worse, 35 kw-hrs, per square metre per day, a guesstimate which the less well informed 'greenies' tend to throw into the debate on this subject.

On top of this, most of the solar energy the Earth receives is already allocated to other uses. Would the greenies suggest we put solar collectors over the wheat paddocks, or over our beaches, or over our forests, or over our cities? One cannot simply claim the planet Earth receives all that energy and we should be using it. It's already being used.

Now, how much energy does the average person use? Have you ever looked at your electricity account, let alone your gas account, to see how much energy you use? Only one person among the hundreds I have talked to has any idea how much energy they use, and that person was the principal of a company selling solar energy devices.

Average domestic energy consumption person in Western Australia is 10 kw-hrs (A) per day. In Perth, WA, energy usage over the last 5 years has climbed to 20 kw-hrs per day.

You now have enough information in the first instance to calculate how much area must be covered by photovoltaic devices to satisfy Australia's domestic energy needs.

It would appear at first glance that each person requires a minimum of 2 square metres of solar collectors.

But, photo-voltaic cells are not 100 percent efficient. In fact, even though some test cells have achieved much higher efficiencies, photovoltaic cells are, on average and over their lifetime, only 10 percent efficient. Ergo, each person would need 20 square metres of collectors. A family with 2.5 children would need up to 90 square metres of collectors.

But, domestic energy consumption constitutes only 3 percent of total energy use (at 10 kw-hrs per day). Each person would need the equivalent of 600 square metres of photovoltaic cells (based on the smaller energy figure quoted above) to 'pay' for their 'share' of society's needs.

The total for Australia as a whole would be 12 billion square metres of solar collectors, i.e., 12,000 square kilometers.

But, energy use in Australia is growing at 2-3 percent per annum. In 45 years time, the magic year of 2050 that Mr. Beazley uses, energy use will be 2.5 - 3.8 times greater, requiring a correspondingly greater collector area, i.e., 30,000 - 45,600 square kilometers.

If the entire world pursued solar energy it would need 315 TIMES as much area (by 2050), a total of 9.5 MILLION square kilometers, and possibly as much as 14.364 million square kilometers.

What is far worse, ALL of the energy that is collected will eventually be dissipated into the environment as waste heat, ADDING to the global warming problem, partly part because solar collectors are not very efficient. Massive amounts of energy must be collected to provide useful energy outputs. In addition, by using solar collectors we effectively increase the total amount of heat absorbed from the Sun. Calculations show that this additional energy would add a minimum of 4⁰ C to global temperatures by 2050, this on top of all the other causes of global warming.

Solar energy might sound good, it might even make a nice auxiliary power source, but it isn't going to satisfy anyone's long term energy needs.

Mr. Beazley talks about increasing Australia's MRET to 5 percent of total energy needs. To what end, when that energy target will be exceeded in only 2 years at current growth rates?

Mr. Beazley says nothing about ethanol fuels even though transport consumes 30 percent of Australia's energy.

Why should anyone waste time on an energy proposal that isn't going to satisfy Australia's long term needs instead of tackling one of the 'big ticket' items?

Finally, Mr. Beazley tells us that nuclear power does not stack up economically, yet he goes on at great length on the subject of making other energy sources more economical. Why should Australian scientists, with their long history of innovation, be forced to ignore nuclear power instead of trying to make it more economical too.

Why should Australian scientists be forced to go overseas to pursue their interests, thus contributing to the very brain drain that Mr. Beazley decries.

Mr. Beazley also tells us that by going to nuclear power Australia might engender a sense of fear in our regional national neighbours.

What kind of Labor government led by what kind of Labor Prime Minister engaging in what kind of activities would act to engender such fear instead of promoting good neighbourliness.

Why would a Labor leader and prime ministerial aspirant want to limit the potential of Australians?

Your response would be appreciated.

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