THE WATER OF LIFE: WATER, FOOD & ENERGY SECURITY FOR 2020 & BEYOND

Wind power is a redundant technology simply because the wind is intermittent, which means wind turbines can never provide base-load electricity (ie power that is there all the time) no matter how many turbines are built.

Wind power does not reduce greenhouse gases because it has to be backed up continuously with fossil fuel generation.

The introduction of wind power as a generation source in Australia under the RET/REC policy has led to a doubling of retail power prices in less than three years; and will cause a further doubling of retail power prices in the next two years.

The only people really profiting from it are foreign-owned developers and the foreign based turbine manufacturers.

For a clean and truly green future that is compatible with Australia's energy needs, the answer is hydro power.

Hydro power brings with it:

- water security:
    - drought proofing cities and farms;
    - doing away with the need for electricity powered desalination plants that sit idle for years at an end (eg South Australia's $1.5 billion White Elephant);
- food security:
    - better control of water means less reliance on imported food;
    - cheaper food in times of drought;
    - the ability to grow fodder for stock in times of drought.
- improved and increased irrigation opportunities:
    - more employment in agriculture and horticulture;
    - increased agricultural output to satisfy increasing Asian demand for Australian food and fibre;
- flood mitigation:
    - safer cities and towns;
    - lower insurance premiums.
- freshwater aquaculture opportunities:
    - opportunities for small businesses;
    - rural and regional employment.

These matters must be addressed in order for Australia to adapt to climate change: storing water during the wet years to better support us during the dry years.

Remember, this is a land of "droughts and flooding rains", as Dorothea Mackellar wrote just over a Century ago.

Not only does hydro power provide irrigation opportunities it is the only truly renewable source of power, which is both pollution free and base-load.

Because it is base-load (unlike wind power) hydro power output can be smoothed to match demand, on an instantaneous consumer driven basis; and for that reason it is used to provide "peaking power" to meet spikes in demand. Something wind power can never do.

Hydro power can supply all users on the Eastern Grid from Far North Queensland to South Australia, Tasmania, and everything in between.

Australia's renewable electricity needs can be readily met by upgrading ageing generation systems on existing dams to increase output; by adding generation systems to existing dams; and constructing dams which have been planned for years, but starved of capital, because the RET/REC policy perversely favours wind power.

Investing in hydro power will add to output all along the Great Dividing Range, from Far North Queensland and all points South, as well as in Tasmania which sends power to the Mainland via the Basslink undersea transmission cable.

By including existing, upgraded and new hydro power generation plants as part of the RET, Australia can reach a renewable energy target well in excess of the current 20% target within a decade.

The cost of upgrading existing and constructing new hydro power generating capacity represents a fraction of the $52 billion that power consumers will be forced to pay as REC tax between now and 2031, when the RET expires.

The entire Snowy Hydro scheme cost $820 million and can generate 3,800 MW of truly clean, base-load power. By comparison, the 2,500 MW of currently "installed wind power capacity" cost around $800,000 per MW to construct – a total construction cost of $2,000,000,000. However, the combined output of all wind farms connected to the Eastern Grid often struggles to reach 300 MW, and is frequently much less than that.

Hydro power is worthy of taxpayer support because it supports agriculture; provides base-load, pollution free electricity at a fraction of the cost of intermittent and unreliable wind power.

Hydro power is a win/win/win for power consumers; water consumers; and Australia's farmers.

The knock-on effects of having cheap and reliable power, once again, mean that we will retain something of a manufacturing industry; and that we are more likely to attract foreign investment in large-scale mining projects, both of which are critical to Australia's economic future.

Plummeting energy costs are attracting manufacturers to the United States, at a time when our electricity costs are driving manufacturers, miners and mineral processors (eg, aluminium smelters) offshore.

Not only will Australia's wider economy benefit from access to cheap power, Australian businesses will be able to create real employment during the process of upgrading or expanding existing hydro power facilities, and in constructing new facilities.

Dams can coexist far more comfortably with the environment and people than industrial wind turbines - their role in flood mitigation actually saves lives.

Giant wind turbines kill hundreds of thousands of birds and bats each year, including endangered species.

Moreover, industrial wind turbines generate annoying low frequency noise for long periods, resulting in sleep deprivation and other adverse health effects for hundreds of neighbours. None of which arise from hydro power, where the noise source is in a single confined location and not spread over hundreds of thousands of square kilometres.

The only people that will suffer from re-investment in, and better management of, our hydro resources are Chinese, Spanish, Danish and Indian turbine makers.

Adapting to climate change involves sensible, cost-effective policies which provide food and water security for generations to come.

Mitigating climate change requires base-load, pollution free electricity.

Hydro power is a known and proven technology which does both.

Australia calls upon the Coalition to commit to a truly clean and green future based on hydro power. The future of our children depends upon it.