True Friends of the Southern Mt Lofty Ranges

Submission No: 73

SUBMISSION TO
Inquiry into the Development of non-fossil fuel energy industry in Australia

Of recent years, there has been a great deal of confusing and conflicting information being published, regarding the relative merits and benefits to people, the environment and the climate, of various methods of non-fossil fuel powered electricity generation. In many instances, it has been apparent the some of the published information has been aimed at achieving greater public and/or government acceptance and support for particular projects, or for particular types of projects.

Much of the published material may therefore, have been biased in accordance with the financial imperatives of sections of the energy generation industry or investors. Some published material has stressed the catastrophic implications of global warming said to be faced by all people, and claimed that particular forms of non-fossil powered electricity generation will help solve this problem. It would appear that some vested interest may have been exploiting the fear factor, aiming to have people accept any potential adverse aspects of various forms of generation, as a necessary cost of saving the planet.

There is therefore, an urgent need for a properly informed, balance and impartial overview of the different forms non-fossil fuel electricity generation, and to determine the part these technologies could play in the development of efficient, cost effective, stable and sustainable electricity generation and distribution systems in this country, systems which will enable us to also achieve meaningful reductions in greenhouse gasses. The True Friends of the Southern Mt. Lofty Ranges commends Hon Ian Macfarlane and the House of Representatives Standing Committee on Industry and Resources for undertaking this Inquiry, and asks that the following factors and issues be included in the Committee's considerations.

FACTORS AND ISSUES TO BE CONSIDERED

There is an urgent need to properly research, evaluate and determine the true costs and benefits in regards to the incorporation of the various different types of non-fossil fuel powered electricity generation units into this country's power generation and distribution systems; and what the true impacts will be in regards to greenhouse gas emissions.

1. **the analysis and modeling undertaken should include all impacts on the various stakeholders - including the State and consumers, with regards to technology reliability, viability, costs, network reliability and safety, and energy costs to consumers, and energy market operation. Any other potential adverse impacts on people, the environment etc. should also be determined. The analysis and modeling should be thorough, detailed and wide-ranging, and include:-**
    - **determination of embodied energy for each form of generation i.e. how much energy is require to manufacture and establish the generation units and associated infrastructure, and what this means in relation to the designed capacity of the generation facility, and in relation to its estimated true expected generation output;**
    - **determination of nature of the electricity generation output i.e. is it unpredictable, intermittent, rapidly variable or unreliable, what addition equipment and/or costs will be required to ensure system stability – including voltage and frequency, what back-up generation is required, how much back-up is required, and for how long???**

1. **full and accurate determinations be made, with regards to the true net greenhouse gas emission decreases that result from the incorporation of non-fossil fuel electricity generation units into this country's power generation and distribution systems. Such determinations should take into account:-**
    - **the greenhouse gas emissions arising from the embodied energy associated with the to manufacture and establishment of the generation units and associated infrastructure;**
    - **the greenhouse gas emissions emitted by any other electricity generating units that may be required to provide back-up generating capacity to the non-fossil fuel powered generators – taking into account the amount of back-up required, and how long it will be necessary**

any determinations of a readily acceptable penetration level of non-fossil fuel generated electrical energy should be weighed against experience elsewhere, taking into account major differentiating factors.

The Inquiry being undertaken by the House of Representatives Standing Committee on Industry and Resources in regards to the development of the non-fossil fuel energy industry is vital. This work should result in investment being directed into areas where the most predictable, reliable and cost effective energy generation can be achieved to meet the growing electricity needs of this country, and into technologies with which true reductions in greenhouse gas emissions can be accomplished.

SUBMISSION