SUBMISSION TO THE AUSTRALIAN GOVERNMENT'S RENEWABLE ENERGY TARGET REVIEW, AUGUST 2012

BY : James Kwok FIEAust CPEng MCMechE NPER FAIM .

Foreword

I am a Australian Chartered Professional Mechanical Engineer with competency in all aspects of power generation, transmission and distribution.

Through out my engineering career I have been responsible for many significant large scale fossil-fuel projects both in Australia and overseas and have held renewable energy generations and transmission licenses in every Australian State for the biomass fueled power generations. I was also granted with Australia's first Renewable Energy Certificate in 2001 from the Australian Greenhouse Office in Canberra (now the Australian Clean Energy Regulator) for a 20MW biomass power generation facility in Stapylton Queensland I both deployed and designed.

The feedstock for this Biomass plant was derived from the Gold Coast City Councils households green waste. This renewable feedstock was being placed in great abundance and expense in the council landfill therefore a biomass plant appeared to be a logical sustainable solution for the council at the time, as this plant both utilized a sustainable renewable energy source and also incorporated the worlds first air condenser cooling rather than using water cooling for use on this plant, which I personally innovated and pioneered.

This highly innovative cutting-edge biomass technology was highly controversial at the time and was successfully commissioned with independent expert verification from Burns Roe Worley (Melbourne, Australia). Sinclair Knight Mertz (SKM, Sydney Australia); GHD Black & Veatch (Sydney, Australia and USA); and was labelled to be "Worlds best practice in sustainability." and granted Australia's first renewable energy certification. However despite all the success the climate changed and the Gold Coast was subjected by drought in early 2000's, gardens did not grow and consequently the previous viable renewable green waste was no longer available, nor the water was available for wash down, and due to the drought stricken conditions a $300 million power purchase agreement with Energy Australia was cancelled under force-majeure and this plant was with great expense and disappointment moth balled.

As a result of my professional experience in the practical implementation of Renewable Energy technologies I would like to make these recommendations to the Climate Change Authority in order to provide a professionally informed Clean Energy Future for Australians as unfortunately to date the long-term viability and changing climate conditions have not taken into consideration with the current "eligible renewable energy resource list approach.", nor have all of these 'eligible renewable sources' on the list proven themselves commercial, viable or affordable for Australia.

In Australians best interest this list must be expanded to include innovative technologies as I have learnt from professional experience and at great financial expense that the "traditional" energy sources are not necessarily viable in an ever changing environment and therefore in interest of financial and environmental resources ***we must move forward and ask better questions to enhance Australia's affordable clean energy security.***

Proposed Declarations for incorporation in the RET.

1. Considerations for public safety and benefits must prevail ahead of profits considerations by service providers.
2. Considerations on natural resources depletions and wastage on technology adapted.
3. Considerations on long-term sustainability on feed stocks as primary fuel.
4. Considerations on technology not emitting other pollutants and hence credit-values for suppression on dust particulate emission, water savings, upstream and downstream processes impacts on carbon footprint.
5. Considerations on technology process Life Cycle Analysis (LCA) when determine carbon abatements net-outcomes and strategy.
6. Considerations on technology that addresses the critical-issue in future energy security and affordable electricity.
7. Considerations for distributed generation technology or distributed power system (DPS).