

Dear Sir,

I recently became aware of the Committee (of which I understand you are the chairman) looking at energy in the N.T.. I wish to make the following submission including the above attachments and ask that you circulate same to the other members of the committee for their perusal.

My focus is on renewable energy resources;

Bio-Gas and/or Bio-Fuels are outlined in the above attachments, "Syngas from waste" and "Bio-Gas info" have both been copied from a trade magazine and are self-explanatory.

The attachment, "Biogas generation a new process" is my own assembly of what could be said to be existing technology. However, I have not seen any of this assembled in this manner before. To a greater extent these installations could be automated. Given that the Territory has a North/South gas pipeline extending to most of the major population bases it would seem logical to incorporate a system such as this to extend/supplement the existing finite gas supplies currently available. The use of "Green power" may be attractive to industry as it may give it a competitive advantage in certain marketplaces. In addition, cost advantages may be available under current or future Carbon Trading schemes either global or local.

Wind Power/Solar; Wind power is said to be unreliable as the wind does not blow all the time and this is true. However, given that there is a power line that almost reaches from Darwin to Alice Springs small wind turbines of say 3-500Kw output could be spread along its length in suitable locations to feed power into this "grid". Units in this size range are readily available and not hugely expensive in terms of purchase and installation costs. Areas in the Barkly Tablelands and Central Australia have very few still days and many bright sunny days from my personal experience. Small hybrid systems of wind/solar configuration could be assembled or procured by the NT Government and sold/leased to people/businesses in remote areas who are currently dependant of diesel fuel for power generation. I would suggest the use of Nickel/Iron batteries in these units as they have a long service life, said to be in the order of forty years, coupled with a twenty five year life expectancy for a solar panel the power produced becomes very affordable over the life of the unit. I believe China has built at least one two megawatt battery system to supplement a wind farm project. The greater buying power of the NT Government should keep component prices down thereby making the systems more affordable in the short term for Territorians in remote areas. It may even be feasible to install individual solar systems on houses etc. in new urban developments in preference to installing the traditional power supply infrastructure.

Tidal power; The large tidal rise and fall of Northern Australia could be harnessed by a series of interconnected tidal power stations. These could extend from the north coast of WA to the mouth of the South Alligator river in the NT.

Alternatively, to the WA border at least. Given that one cubic metre of water moving at one metre/second is said to contain one kilowatt of energy if one is to look at the volume of water moving along the NT coastline the amount of potential energy available is huge to say the

very least. Also it must be considered that there is a difference of some hours between the East and West coast the potential for an uninterrupted flow of power is enhanced. It may even be possible to sell power to Indonesia or East Timor via a subsea cable similar to the cable between Tasmania and the mainland.

I would be happy to make myself available to answer as best I can any questions the committee may have.

Thanking you,

Geoff Casey.