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### **Submission to WA Sustainability Policy Unit on Sustainable Energy**

The consultation draft of the WA strategy has 3 pages on "Sustainable Energy". These fail to address the question of electricity generation in any thorough way and completely ignore the matter of meeting base-load electricity demand in the state.

The draft's statement on p 154 that "The need for sustainable energy is about the transition from fossil fuels to renewable energy sources" is incorrect and misleading. Sustainability in energy is more complex.

Western Power Corporation generates some 12.4 billion kWh per year, almost 11 billion kWh of this being steam-generated. (Perhaps half as much power again is generated by gas turbines and cogeneration off the main grid.) We understand that most of the demand served is base-load, ie it requires continuous, reliable supply. The "renewables" advocated in the draft cannot meet this demand.

While this Centre strongly supports the harnessing of renewable energy sources, particularly for electricity, there are practical limits in relation to the demand needing to be met in a developed economy such as WA. Wind energy advocates (European Wind Energy Association & Greenpeace) suggest that about 20% of total supply is a practical maximum, but recent experience in Germany and Denmark suggests that the level at which major inefficiencies become evident in the whole supply infrastructure is rather less than this. In WA, without any major hydro-electric capacity, the level may be lower again because gas turbines will be required to quickly compensate for deficiencies in wind. German experience has shown that even with under 10% wind contribution overall, major inefficiencies result in other sources of power because of the need to keep them on standby.

WA needs to address the question of sustainable provision of base-load power and not simply divert attention from this by advocating "renewables". Being "globally innovative and locally responsible" (p.155) should not mean being impractical or economically irresponsible. In addition, squandering natural gas for electricity raises some ethical questions in a sustainable development context. Gas (providing 29% of WA electricity) is a very versatile energy source and chemical feedstock and our grandchildren are unlikely to thank us for using it for base-load electricity (as distinct from uranium which has no other uses - though hydrogen production is likely to become important).

If avoiding greenhouse gas emissions is a priority, and non-carbon sources of electricity are a desideratum, then nuclear energy will have to be seriously considered for WA. It is already a major factor in meeting Kyoto goals in Europe and elsewhere. For WA it is a question of whether ideological or environmental priorities prevail.

The attached briefing paper presents a UIC view of Sustainable Energy, focused on electricity.

Further information on this submission: [uic@mpx.com.au](mailto:uic@mpx.com.au), contact Ian Hore-Lacy.

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