Submission to the Clean Energy Finance Corporation

Andrew Lang
Board member of the World Bioenergy Association - representing Australasia-Oceania
Convenor of The Wood Energy Group
Chairman of SMARTimbers Cooperative
Secretary of Farm Forest Growers Victoria (umbrella body to all 10 farm forestry networks)
Member of Central Highlands Agribusiness Forum CHAF (centred on Ballarat, Victoria)
Coordinator of CHAF-auspiced Bioenergy Technology course from Linnaeus University Sweden

Background
This submission is made primarily from my expertise derived from study over a number of years of renewable energy across a number of northern hemisphere countries – particularly Austria, Denmark Finland and Sweden. This has included a Gottstein Fellowship study in 2008 of policy underpinning development of energy from biomass in the Nordic countries since 1980.
This has led onto my coming to represent the Australasia-Oceania region on the board of the World Bioenergy Association. This body is one of the five peak bodies for the renewable energy sectors (which includes wind, hydro, solar and geothermal) together makes up the Renewable Energy Alliance. This board membership has taken me to North America, Europe, Africa India and China, and I look for how the development of renewable energy is stimulated and what part coherent long-term government policy plays in its development.

As a farmer and farm forester and from over eight years of travel and study of private forest owners' groups, and of production of energy from biomass from forestry, agriculture and municipalities (including mixed municipal waste), it is clear that the whole sector of energy from biomass and waste has been puzzlingly neglected in Australia. It is not included in coherent planning at state or federal level and the examples of how its development has been managed, particularly since the 1970s oil price shocks, in most other parts of the world seem to be ignored by policy developers, politicians, media commentators, consulting organisations and NGOs involved in advancement of renewable energy options.

However it is evident from these models and examples that the sector is already mature, the systems and equipment are available off-the-shelf, and in many instances the costs per unit of energy produced are significantly less than for the renewable energy options that have been fostered and stimulated here over the last ten years – namely electricity from wind, solar PV, and geothermal technology.

The CEFC has real scope in reversing this situation to one at least of parity, and within this of recognising that the efficiency of biomass ot energy relies of utilisation of heat produced as well as electricity, or in many cases of heat and cooling, or in some instances, or biofuels or industrial chemicals that substitute for petro-chemicals.

To deal with the questions raised.
Most of my submission is particularly to do with the recognition and reversal neglect of bioenergy in Australia to this time. Energy from biomass and municipal waste is potentially the most cost-effective and efficient was to achieve not just the 20% of electricity from renewable sources, but alos up to 30% of domestic and industrial heat energy, and up to 30% of liquid and gas transport fuels.

Scope

1. <u>How can CEFC facilitate investment?</u> – by recognising the potential for renewables to produce more than just electricity and to foster the production of heat only, or heat and cooling, or heat, electricity and cooling, or biofuels and industrial chemicals. It should also recognise the potential for co-firing of forestry and agricultural biomass with coal, possibly in the form of pellets (including in briquette form) or torrefied pellets, or the production of these

materials for export offshore. This production may include the whole production chain from harvesting and aggregation, processing and drying, densifying (including torrefying) and packaging and transport.

2. There are principles beyond financial viability that need to be recognised and used in prioritising investment or for demonstrations. Examples are in ability to generate permanent rural jobs, to stimulate alternative complementary farm enterprises and hence income, to reduce risks of climate change, and to demonstrate the viability of use of biomass for supply of low or high temperature industrial process heat from agribusiness industrial wastes – ie cotton gin waste, maize or cereal crop harvest waste, olive or stone fruit processing, etc. A further opportunity lies in the potential for energy from biomass and waste to be used to assist isolated communities or communities with inadequate electricity supply to become less affected by this lack in development of new energy using industry or enterprises.

3. Opportunities for CEFC to partner with other organisations are obvious. It is however unfortunate that many of these other organisations have suffered severed funding cuts over the recent years, and this trend is likely to continue. Some examples are CSIRO, various CRCs, RIRDC, Land and Water Australia (LWA). Joint Venture Agroforestry Program. The loss of parts or the entirety of these organisations indicates the lack of a whole coherent long term plan for advancement of renewable energy in Australia within the context of the rural sector and rural or primary industries.

The Market Gap and over coming it

4. How would the CEFC catalyse the flow of funds from financial institutions. The institutions respond to long term certainty (or at lest high likelihood) of making a commercial return. So the key thing is for the CEFC to assist in this being the case. This may be by development of guarantees by government, by assembling suitable joint investing partnerships. Most criically it is by ensuring that there is a long standing understanding across all areas of politics that economically viable ventures in this area requires bi-partisan support. It may be a matter of identifying and picking winners – which brings me back to reversing the policy neglect of the array of bioenergy technologies and options.
5. Have term, cost or availability of funds been the inhibitor? Long term certainty based on sound cost-effective technologies has been lacking, and this is the primary inhibitor, along with lack of certainty in this situation of having a long enough period of certainty to recover investment. This has been evident in reversal of policies at state and federal level on solar PV, on issuing of phantom RECs for solar PV, and of issuing of RECS for heat pumps and solar heat collectors.
   In the case of wind there is growing apposition by regional landowners, coupled with the fact that wind power is unpredictable and hence will have minimal reduction on fossil fuel use. In the case of solar PV the costs/MW-e produced are far beyond all other options plus it is not baseload. In the case of hot dry rock geothermal it is a costly and technically risky technology with the best sites far from any access to the national grid. It is only in the case of biomass to energy in all its forms that w find a cost-competitive baseload

energy source (and a source of chemicals and biofuels) which is however not recognised or promoted due to opposition by pressure groups.

6. Non-financial factors inhibiting clean energy prospects? General lack of good information in the media and from government about the real basis for options for investment. Lack of good clear long-term policies that run ahead 30 years. Loss of respect by business for certainty of government policies and of government policy makers being really across the issues.
7. Special factors inhibiting energy efficiency projects – mainly the issue of Greens and follower conservation groups pushing narrow and blinkered agendas. This is particularly relevant to the development of the wide range of bioenergy technology, feedstocks and products. But faulty promotion by vested interest groups without authoritative counter information from unbiased bodies has led to general confusion including at higher levels of investment decision makers. New Zealand and most other countries appear to have done it better.

Other issues

8. How could the CEFC fit in with other government initiatives on clean energy? In light of the previous comments the most important aspect of improving flow of investment is investor certainty in getting a return – or the perceived high risks of not getting one, and being abandoned with a sudden change of policy or dropping of subsidy. In this light all other initiatives are liable to change by change of government or by change of some policy reworking due to another economic downturn etc.

Other views or input.

To date the government has had a history of too often only producing 'half policies'. For example -

- we have had legislation enforcing the replacing of incandescent light bulbs without any system for dealing with compact fluorescent light bulbs instead of them going to landfill
- we have polices to reduce municipal waste to landfill without any real development of municipal waste-to-energy or improvement in recycling systems
- we have a solar flagship funding without corresponding funding for alternate and more cost-competitive renewables, particularly bioenergy
- we have RECs awarded to heat energy produced by heat pumps and solar household heat collectors, but not to heat from bioenergy
- we have no sensible and coherent policies driving wind farm placement – particularly in off shore sites, as is being increasingly done in northern Europe
- the introduction of the carbon farming initiative legislation, which contains no stimulus or coherent plan for carbon sequestration via farm production sawlog woodlot planting, or production of energy from bioenergy or of biofuels (liquid or gas) to substitute for fossil fuels
- R&D funding for solar PV is historically erratic though the talk is all there, and then we had the support for remote communities solar which was abruptly terminated

- Much talk about the virtues of biochar (including built into the CFI) but no awareness about the need to have a profusion of slow pyrolysis plants to produce the biochar along with heat and electricity.

Frankly it is pathetic to watch this series of really dumb mistakes being made. The models for how to do all these things can be found in an array of countries but fund is not available for policy makers and people involved in R&D in these areas to travel. This is a really key area to rectify.