

Clean Energy Finance Corporation Expert Review

<http://www.cefcexpertreview.gov.au/content/Content.aspx?doc=consultation/subrequest/default.htm>

I submit the following to the expert review

The Corporation should focus entirely or mainly on research and development that aims to make renewable energy competitive with, and preferable to fossil fuel energy sources.

Financing schemes that the private financiers won't is not good economics, despite the dire need for rapid development of renewable capacity, both here and overseas. There is a huge risk of failure of such schemes, and that failure being used to tarnish the entire strategy.

There is also a risk that politicians will prefer schemes that look good in a press release, and preferably to be built in their electorate, by a business associate. This must be resisted in your constitution and governance.

Australia's GHG emissions, although very high per-capita compared to the rest of the world, is low in total. We export more emissions as coal, gas and aluminium than what we consume. This is greatly subsidised by the Government through infrastructure and tax breaks for emissions intensive exports.

The significance of our emissions export profile is that the greatest contribution we could make would be to develop technologies that can be exported.

For example, a technology that could capture some of Australia's abundant solar energy and store it in an exportable form would assist our exports as well as energy-hungry developing nations.

It should not be a requirement that the new technology be manufactured here. The University of NSW's solar technology has been scaled to the largest solar panel factory in the world. The fact that this is in China is a success because the product can be export much cheaper from there and Australia receives patent income to develop better technology.

(The Sun King: Shi Zhengrong, The Monthly, June 2011)

Why should CEFC co-finance schemes that are expected to be profitable? Perhaps it is necessary as a means to maintain the balance sheet. The CEFC should look to finance schemes which are expected to demonstrate new and future possibilities, to rule out some and to de-risk others so that private financiers can do the sums and invest.

The CEFC should be modelled on Angel venture capitalists, those that invest in a number of speculative research operations, but realistically expect very few to be rewarded.

There are so many candidate technologies in renewables, waste elimination and emissions reductions, that it will be difficult to pick winners. Each will have strong advocates. Some objective guidelines must be developed. These should include:

- Emissions reductions potential
- Energy cost per Joule or KW/h
- Full life-cycle assessment (consider for example electric battery disposal)
- Manufacturing Complexity (will it scale)
- Timescale to mass deployment (will it deliver within 5, 10 or 20 years)
- Exportability (Can we export the technology, or the energy)
- Storage potential
- Applicable to transport, buildings, agriculture(the major emission sectors)
- Other benefits to society

I fear that the CEFC may take a too conservative approach, like just another super fund trying to align its results to other funds on the same index. This would be a waste of an important opportunity.

I submit the fund invest in Australian universities and companies trying to develop renewables and related technology into a cost-effective energy source.

Investment in the smart grid is one area which the CEFC should consider. A Smart Grid combined with domestic solar panels and electric vehicles with their large batteries opens the possibility of creating a whole new market for cellular electricity production and distribution that would rapidly reduce reliance of fossil fuels by large fixed generators.

I submit that the carbon tax has been over-sold. There is no level of carbon tax that would significantly reduce emissions without impacting the economy more than what is politically achievable. The carbon tax can only send a mild signal and then adaption only occurs if there is price-sensitivity as well as real measurement of actual emissions. Subsidising solar or wind power plants, whether by RETs or government finance is never going to have more than a marginal impact while the costs of renewables remains high. The only benefit from the subsidies is to allow industry and capital markets to learn from mistakes and maybe make future operations marginally more efficient. For example, the massive subsidies around the world for solar panels have led to a major scaling up of this infant industry. This has helped it to develop new technologies and bring costs down. Yet it is still not cost effective without subsidies (except in remote areas), but the gap is closing. Clearly technical improvements are required to achieve price competitiveness with fossil fuels.

The task is daunting, but our brightest minds have turned their collective attention to the problem. They need support from the finance community to succeed.

Sincerely,

Chris Goodman

References

1. The Sun King: Shi Zhengrong, The Monthly, June 2011

<http://www.themonthly.com.au/shi-zhengrong-sun-king-eric-knight-3363>

3. Bjorn Lomborg

Bjorn Lomborg, author of *The Sceptical Environmentalist* and *Cool It*, believes that climate change is real but the current approach to addressing it is ineffective and far too expensive. He argues that research and development in green energy is the smart way to tackle the problem.

<http://www.abc.net.au/radionational/programs/counterpoint/bjorn-lomborg-a-smarter-approach-to-climate-change/3002844>

2. Stephen Chu, US Secretary of Energy

http://www.foreignpolicy.com/articles/2010/11/29/the_fp_top_100_global_thinkers?page=0,13

4. John Doerr

http://www.ted.com/talks/john_doerr_sees_salvation_and_profit_in_greentech.html