Terry McBride December 8, 2011

West Ryde NSW
Clean Energy Finance Corporation

Expert Panel Review Submission

Dear Ms Broadbent,

Scope for the operations of the CEFC

Facilitating investment

Development of the grid

The current grid is an accident of history, serving coal-fired power stations that were built wherever it was most convenient, that is, accessible to coal resources. This can be a short term obstacle to achieving the best network for the future. Regions suitable for renewable energy production may require new grid connections. First-of-a-kind development in such a region may find provision of grid access prohibitively expensive, even though it makes economic sense for the country in the long term. The CEFC should engage with state government-owned entities over grid connection barriers in order to create an environment which will allow an affordable connection of renewable energy to the grid. It should also streamline the bureaucracy for grid connection.

Power purchase agreements

The CEFC should engage with privately owned electricity retailers/companies over power purchase agreements in order to facilitate a fair and reasonable outcome to allow renewable energy onto the grid.

Principles beyond financial viability

Emissions and other environmental impacts

The CEFC must recognise that gas (especially from coal seams) is not a particularly low emissions resource and is otherwise environmentally degrading. It should not assist any project that has CO2 or any other greenhouse gas emissions from its operation.

Other externalities that should be taken into account are the:

- damage to underground water resources
- health impacts of local communities surrounding CO2 emitting power stations
- damage to the environment
- damage to water supplies and
- damage to prime agricultural land.

All-new power generating proposals should include the associated risk, financial cost and health cost to the community in before approval.

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The national interest and risk management

Rollout

The slow roll-out of renewable energy infrastructure exposes the different states of Australia to different levels of risk:

- The price of oil and gas is expected to rise over the next 30 years. A slow roll-out of renewable energy infrastructure would expose Australian states to increases in construction costs over time, thereby decreasing the financial viability of renewable energy projects. A fast roll-out of commercially available renewable energy technologies, such as concentrated solar thermal with molten salt storage (CST+) providing 24-hours a day baseload power, reduces exposure to peak oil and gas.
- Australia and its states are exposed to international tariffs should renewable energy rollout not be comparable with capital expenditure of overseas countries.
- Lack of renewable energy baseload power generation in Australia's generation mix will see Australia not meet its International renewable energy obligations.

Ownership

State government ownership of a project should be seen as a low risk venture as the project is backed by the state government (which has a AAA credit rating). Private enterprise is increasingly exposed to international financial turmoil which affects the ability of private enterprise to gain credit to build new power stations. This increases the risk of default to the CEFC should the company not be able to repay its debts.

Continuation of fossil fuel

Continuation of fossil fuels is associated with several types of risk:

- The federal and state governments are exposed to huge compensation payouts to fossil fuel generators should they have to be shut down before the end of their working life due to international pressure, for example, an international agreement is reached to stop putting greenhouse gases into the atmosphere.
- Fluctuations in price of fossil fuel will increase as demand outstrips supply over the next decade.
- Higher costs for building renewable energy capacity the longer such investment decisions are delayed, that is, rising cost of oil and gas
- Increased costs to the Australian and state governments as subsidies are increased to the fossil fuel industry due to rising fuel prices.

How this gap in financing could be overcome

Investment guidelines

Governments generally have a poor record of picking winners. This results in a preference for using the government's funds to leverage private funding, and letting the private investors do due diligence. This will fail to address long term needs. If we accept that zero emissions is the ultimate necessity, the key challenge is renewable baseload power supply. That drives solar thermal with molten salt storage and

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geothermal. But investors have no incentive to see the big picture. They can do just fine with wind and PV getting up to 40% or so of supply. That might not be the best path to the eventual need.

- The technology mix must form part of a vision for a zero emissions economy. This rules out gas, and biases against intermittent sources. A dispatchable resource, which can be teamed with cheap intermittent sources, would earn the most points.
- Technologies with long term promise but high first-of-a-kind costs and risk should be favoured. Since these kick-start the associated construction industry in the state that's home to the project, state investment is appropriate.
- Commercially proven technologies should receive the bulk of the available finance, but some reserved for more speculative schemes.
- Community owned renewable energy projects should have the same access to funds and support as big business.

Financing the market gap

In the absence of financial incentives such as government loan guarantees or a solar feed-in tariff, it is expected that the private sector will initially be reluctant to invest in this technology due to the high initial construction cost for the first CST+ plant. It is therefore suggested that the State Government's should commission and operate the first four 75 MW CST+ power plants, drawing approximately 80% of the funds required for construction from the Australian Government's recently announced Clean Energy Finance Corporation (CEFC) and possibly the Australian Renewable Energy Agency (ARENA).

Statewide or National feed in tariff available to private enterprise to build only Large Scale CST with molten salt storage(CST+). This would come into effect after the State government has built the first 300 MW of CST+ which will have allowed the construction cost curve to drop sufficiently for private enterprise to be interested. A feed in tariff would be necessary in order to bridge the cost gap and incentivise private enterprise to build CST+. The feed in tariff would only be available to new CST+ over 100 MW. The cost to the state governments would be partially offset by money retained by the government in the form of reduced subsidies to fossil fuel power stations. Thereby reducing the price impact to state consumers. This creates price certainty for the debt provider and will drive demand for new projects and industry expansion with new job creation.

How the CEFC could work with other government and market organisations.

In conducting the Review, the Chair is to put in place a process for consulting key stakeholders, including wind producers and CST+ companies, about the role of the CEFC and its relationship with the Renewable Energy Target and the supply of Renewable Energy Certificates.

The CEFC should:

- Encourage state governments to commit to yearly mandatory target increases in renewable energy onto the grid.
- Encourage state government ownership in order to drop construction cost curve.
- Engage with retailers to stop unfair barrier to entry by not negotiating power purchase agreements

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- License energy retailers to only buy RECs from within their own state borders
- Remove excess RECs from power generators and retailers.
- Reform business models of electricity retailers so that they are able to generate revenue from saving electricity as well as producing electricity, along the lines of the Californian model, thereby providing retailers with financial incentives for demand management and energy efficiency
- Create a clear pipeline of CST+ and wind projects creating investor certainty.
- Oblige Transgrid to consider GHG emission impacts of new generating proposals. This should include consideration of a potential (or actual) carbon price and the costs of non-mitigation. In particular, relaxation of the Regulatory Investment Test applied by AEMC should be undertaken to allow increased interconnector investment. Alternatively, partial government subsidisation of new interconnectors should be undertaken. Legislative obligations could also be placed on Transgrid to connect new renewable capacity to the network following a process of consultation between project proponents and the transmission owner. The identification of suitable wind, solar and geothermal 'precincts' where clusters of projects could potentially be sited has been and is being undertaken by AEMO.

  Transgrid should streamline its processes for renewable energy applications as well as waive the costs on some of the renewable energy applications process as the existing applications process is time-consuming and costly.

Recent reviews of renewable energy policy in Australia have drawn attention to a number of deficiencies in existing policies and practices at the state and federal levels (e.g. Buckman 2011; Daley 2011; Buckman & Diesendorf 2010). These deficiencies relate primarily to:

- a lack of policy coordination both within and between jurisdictions,
- poorly designed and administered grant and rebate programs,
- a regulatory framework which provides disincentives to renewable energy investment.

These problems have been compounded by a lack of clear policy direction for renewable energy investment in the state and structural barriers to new players and technologies entering the market. These problems are by no means insoluble, however, and can be addressed in most cases by making relatively minor adjustments to existing policy. The main policies which can be modified to produce potentially significant increases in large-scale renewable energy generating capacity in NSW (and Australia more generally) are the:

- Renewable Energy Target (RET) legislation
- Renewable Energy Certificate scheme
- Power purchase agreements that obligates the retailers to buy X% renewable energy
- Regulatory Investment Test applied by the Australian Energy Market Commission (AEMC)
- Regulations governing the operations of Transgrid.

Implementation of the reforms to existing policy outlined below will clarify the obligations of generators, transmission owners and retailers. It will also provide investor certainty, and clear and transparent renewable energy capacity targets for states to meet over the remaining decade.

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Goal: 100% renewable

Eventually, we have to achieve negligible GHG emissions. Given that several leading renewable technologies provide intermittent power, this would create problems for the grid. Since large scale electrical storage remains extremely expensive, it will be key to promote renewable technologies that can integrate well with intermittent ones. Baseload would be good, but dispatchable is better. CST+ is the only commercially proven technology that can do both. Geothermal may become another option when it is proven at large-scale power supply.

Funding Streams

Funding should be divided into two streams:

- 70% to renewable energy projects only
- 30% to energy efficiency programs

Commercially available renewable energy technologies should be given priority

No funding should be made available to low emissions technologies.

Positioning the CEFC within the broader objectives of the Government's Clean Energy Future Package

The government's clean energy future package objectives should be to cut Australia's greenhouse gas emissions dramatically in a timeframe in accordance with climate science. The governments clean energy future package should act in the best interests of the Australian taxpayer according to the best available climate science.

Operation of the CEFC

Responsibilities, office holders including the Board, Chair and Chief Executive Officer

They should not to base their decisions on a purely economic outcome. To be bold and brave in making decisions that will be visionary and hold Australia in good stead into the future. Consult with people other than those in the financial industry. To act in the best interest of the Australian people and not those of the business community. To provide frank and fearless advice to the government over the deployment of renewable energy.

Appropriate Board structure, representation and skills

The board should be made up of people from renewable energy industries such as Wind, CST and PV and from grassroots community renewable energy groups with suitable backgrounds in engineering, business management or education in Australia's electrical grid management or power generation.

Reporting obligations of the Board

The operation of the board should be open and transparent at all times to all taxpayers of Australia.

The board should be independent from the influence of government and political interference.

Any interference whether it be government, political or business oriented should be reported to the appropriate authorities.

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Relationship between the Board and responsible Ministers

The board should report to the Minister responsible once every four weeks on progress of new renewable energy projects applied for and commissioned. The minutes of the meetings should be made available to the general public within 7 days of the meeting concluding.

Duties and functions of the CEFC employees

To provide frank and fearless advice to management.

To act in the interests of the Australian people.

To deliver renewable energy projects onto the Australian grid as fast as possible.

External Bodies

In the context of the proposed operating mandate, assess how the CEFC will interact with other Australian Government bodies and initiatives, including the Australian Renewable Energy Agency and Low Carbon Australia. Where appropriate, recommend a path for transitioning from the current arrangements to arrangements which streamline support for cost-effective carbon reduction.

Investigate with state governments how state government owned infrastructure can reduce the construction costs for private enterprise to build baseload renewable energy projects. For example, the state government may owned and operate the 1st 300 to 500 MW of CST+ in order to drop the construction cost curve for private enterprise. Australia needs 42,500MW of CST+ the first 300MW's in each state is not much.

CEFC should recommend all current funding to carbon capture and storage cease immediately and those funds the re diverted to renewable energy projects under the CEFC.

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