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Solar Flagships Team
Business Model Design Project
Solar Flagship Program
Clean Energy Initiative

By email: solarflagships@bcg.com

Dear Sir / Madam

Response to issues affecting the business model design for the Solar Flagship Program

The Clean Energy Council (CEC) is the peak body representing Australia's clean energy and energy efficiency industries. Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies;
- develop effective legislation and regulation to reduce energy demand and improve its efficient use; and
- work to reduce costs and remove all other barriers to accessing clean energy.

The CEC advocates the development of policies on behalf of its members at federal and state government levels and promotes understanding of the industry and its potential through channels such as industry events, forums, conferences, newsletters and publications. The clean energy industry includes generation of electricity using wind, hydro, solar, biomass, geothermal and ocean energy as well as the emerging technologies and service providers in the energy efficiency sector, which includes solar hot water and cogeneration.

The CEC welcomes the opportunity to provide a submission in response to issues affecting the business model design for the Solar Flagship Program (the **Program**).

The CEC is pleased to support the Program and views it as a unique opportunity to test emerging solar technologies at scale.

This submission outlines the CEC's view on key issues in relation to the development of the Program.

Cost and Finance

The full costs of the Program (total 1000MW) are unknown. The Government has provided for up to \$1.5 billion to support the Solar Flagship Program and is targeting to leverage this with \$2 of state and industry funding for every \$1 of federal funding. It is the CEC's view that this level of funding will not be enough to build the targeted 1000MW capacity, particularly if the focus remains on bringing forward 4 large (250 MW) projects.

The capital expenditure required to finance large 250MW projects is considerable. Attracting the additional finance that would be required creates a significant barrier to the deployment of such large projects and the success of the program. A key role for the government is to make funding available to facilitate the securing of additional private financing.

Technologies

The Government proposes that the projects could demonstrate a range of technologies, with up to two projects each for photovoltaic (PV) and solar thermal (CST) based, to maximise learning benefits and technology demonstration. While the CEC strongly supports the program including established technologies, the Government needs to be careful not to limit the support to just these technologies but should broaden its scope to include emerging technologies so as not to pick 'winners' but allow the development of all possible options.

The Government proposes that storage be a part of all Flagship projects. The CEC does not see storage as a prerequisite for the projects but advocates leaving its inclusion up to the proponents.

Size of projects

The Program is currently proposing to fund up to four solar power stations operating within the energy market of up to 250MW. The CEC does not believe it is necessary to restrict the project size to four installations of up to 250 MW each. Given that the aim of the Program is to bring forward emerging solar technologies, within the timeframe stipulated for deployment, it may be beyond the ability of some of the technologies. Such a large development will increase both the risk of failure and cost of these projects. The Program should allow the flexibility of development to include smaller projects in addition to those at a larger scale.

Location

Individual project locations should be determined by the project proponents, not by the Program.

It should be recognised that during the initial phases of development, the installed capacity is likely to be smaller than the final installed capacity. The network infrastructure in the particular location will need to be sized to accommodate both the initial and final installed capacity. This raises an issue about building network capacity beyond the immediate need of the project(s).

This issue is being explored in the AEMC *Review of Energy Market Frameworks in light of Climate Change Policies: 2nd Interim Report June 2009*. The Solar Flagships Program needs to be developed with reference to this work, particularly around mechanisms such as the NERG service provision, AEMO's role and the transmission network congestion and constraint issues.

The CEC does not believe there is a need to 'force' the projects into pre-selected Solar Parks, but the Program should be able to facilitate the bringing together of a number of projects if they are proposed in close proximity.

Operating Structure

In general the CEC sees a common consortium for these types of projects that could be best considered by the Program to include an electrical company, a civil engineering company and a technology/equipment supplier.

Management and Timelines

The CEC believes that a single Program manager trying to manage the construction and operation of all Projects with a mix of technologies is likely to be very inefficient. The CEC recommends that the projects are managed as separate entities.

The Government's proposal for all projects to be managed by a single entity is likely to be difficult in practice. With the expected mix of technologies and sites, the plants are likely to be at different development and construction stages and face different issues wholesaling into the grid. The CEC recommends that the projects are managed as separate entities to allow for a more effective operating capability.

The CEC believes that given the scale of the Program, and its focus on emerging technologies, the proposed timeline, with commissioning expected from 2015 is very tight. Whilst the more mature technologies may be ready to deploy at scale, the timeline fails to allow for the varying developmental stages that the particular technologies are at, and how quickly they can scale up. A more flexible timeline to reflect the development pathways of the different technologies should be developed.

Financial Structure

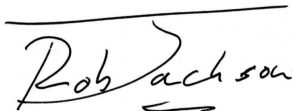
Attracting additional finance is likely to be one of the biggest barriers to the success of the Program, especially in light of recent economic problems. The CEC believes that the financial structure of the Program should be developed in conjunction with a financial advisor to ensure that the individual project(s) are financially viable. A key role for the government must be to make funding available to facilitate the securing of additional private finance.

Additional comments

The requirements to be successful for the Program must be well understood by all bidding parties. Perhaps a weighting mechanism for each selection criteria could be used to enable the proponents to present their best technical and commercial options with equal opportunity.

The Program could provide a useful example of how to support emerging technologies through the so-called 'Valley of Death' as they move from Research and Development to commercial deployment. It is important that the lessons of the Program are captured to inform the development of support programs for other emerging technologies.

Yours sincerely

A handwritten signature in black ink that reads "Rob Jackson". The signature is written in a cursive style with a horizontal line above the name and a small flourish at the end.

Rob Jackson
General Manger - Policy