



2 November 2011

Mr Stephen Palethorpe
Committee Secretary
Senate Environment and Communications Legislation Committee
Parliament House
CANBERRA ACT 2600

Dear Mr Palethorpe

Re: Senate Committee Inquiry into The Australian Renewable Energy Agency Bill 2011 (The Bill)

The Australian Geothermal Energy Association (AGEA) welcomes the opportunity to contribute to the Senate Committee's deliberations on the Australian Renewable Energy Agency (ARENA) Bill 2011 and is pleased to make the following contribution. In doing so, AGEA supports the Government's intention to streamline support for the early stage development of Australia's renewable energy technologies through the establishment of ARENA and its consolidation of Commonwealth programs.

AGEA's contribution centres primarily on the functions laid out in Clause 8 and its relationship to Clauses 10 and 19. This submission also makes some general observations on the object of The Bill and on the timing and progress of the support measures for the development of Australia's geothermal energy industry through ACRE and into ARENA and through other related policy mechanisms.

In Clause 3, the main object of the Bill is stated as:

- (a) improve the competitiveness of renewable energy technologies; and
- (b) increase the supply of renewable energy in Australia.

AGEA fully supports the object of the Bill and its contribution is based on the goal of achieving it in relation to the Australian geothermal industry.

Clause 8 describes ARENA's main function which is:

"to provide financial assistance for research into renewable energy technologies or the development, demonstration, commercialisation or deployment of renewable energy technologies".

Clause 10 requires that this provision of financial assistance needs to be in accordance with ARENA's funding strategy and Clause 19 requires the Board "to develop a general funding strategy for each financial year starting with 2012-13" which "must state ARENA's principal objectives and priorities for the provision of financial assistance during the financial year for which it is developed, and for the next 2 financial years".

Australian Geothermal Energy Association

ABN 70 831 562 598

PO Box 1048 Flagstaff Hill, South Australia, 5159, Australia

T: +61 (08) 8270 7227 E: s.jeanes@bigpond.com M: +61 (0)419 833 556 W: www.agea.org.au

Funding assistance is needed at the early stage of development for a number of Australia's renewable energy technologies. AGEA urges that three considerations are taken into account in the Committee's consideration of the objectives underpinning the establishment of ARENA and its incorporation of the current activities of the Australian Centre for Renewable Energy (ACRE) and the development of its own funding strategy:

1. Policy stability in line with technology and industry development needs;
2. Alignment with other policy programs that have other particular objectives such as support for R&D, project deployment and economy wide impacts such as carbon pricing; and
3. The need to not only pick project winners but also technology winners where the development and deployment of strategically important renewable technologies have other national interest benefits.

1. Policy Stability in line with industry needs

As a major solution to the energy supply challenge in a carbon constrained world, the development of Australia's renewable energy industry and the various technologies that comprise this industry has been adversely affected by policy instability, technology challenges and global financial movements. AGEA has been concerned for some time that this is impeding the capacity of the geothermal industry to play its part in meeting this challenge and overcoming the barriers to full scale deployment. As such, AGEA has contributed to the development of ACRE and its funding strategy and is keen to seek further funding support through its current policy programs. AGEA is keen to see a smooth transition to ARENA and to see stability in the development and implementation of ARENA's programs. The main function of ARENA will be to provide financial assistance to renewable energy technologies and the Board will be required to develop annual funding strategies with three year horizons.

AGEA urges that an important objective for ARENA in developing strategies to provide financial assistance needs to be maintaining policy stability in line with the timelines for the development of renewable energy technologies that feed into the cost and risk reductions of renewable energy projects. For geothermal energy projects in particular, this requires considerable upfront funding for the harnessing of the resource through drilling wells, stimulating and developing underground reservoirs and enhancing flow rates. These processes take time to deliver benefits from the early stages of resource identification through to commercialisation and the industry needs stable ongoing support and the time and space to learn lessons.

This requirement is perhaps unique to geothermal energy in that our laboratories are in fact 4 to 5 kilometre deep wells that cost upwards of \$15m to drill at this early stage and dramatic cost reductions will not occur until we have multiple projects continuously occupying expensive drilling equipment.¹¹

¹¹ Drilling rigs suitable for drilling 4 to 5 kilometre deep wells into hard granites and compressed sandstones typically cost upwards of \$50m to construct and in the vicinity of \$5m to get them to Australia if drilling companies will come for an uncertain and small number of wells.

2. Alignment with other programs

One of the current challenges for the geothermal industry in accessing funding from the markets is that investors do not see a defined income stream. Constant feedback from the investment sector is that they are not prepared to bear much of the risk in the development of the early wells, they do not see space in the deployment measure, the Large Renewable Energy Target (LRET) and they do want to see a legislated carbon pricing regime so that they can understand the energy infrastructure investment task over the coming decades and calculate returns.

AGEA believes that a vital role for ARENA must be to advise on whole of government approaches to the development of the renewable energy industry in Australia so that there is a smooth transition through the R&D phase to the demonstration and commercialisation phases across portfolios and that it should be given the mandate to do so.

3. Picking winners

Governments have tended to be timid in recent times about the issue of 'picking winners'. The very nature of public funding programs however requires the selection of winners. Also, in recent years the Commonwealth Government has prioritised the coal and solar industries with significant funding support.

AGEA strongly believes that the energy supply and climate dilemma is not going to be resolved with the technologies available in the Australian market today and that support should be targeted to those technologies that can meet the object of the Bill and provide other national interest benefits that add value to the Commonwealth's investment in technology and project development.

For example, geothermal energy is the only form of energy with all the following national interest benefits:

- World class resource dispersed throughout Australia
- Baseload capability
- Lowest environmental footprint per megawatt output of all energy sources
- Predicted to be the low/est cost energy technology in a carbon constrained economy²
- Emissions free
- Capable of integration with other technologies (e.g. solar and gas)
- Scalable for on and off grid projects
- Large resource capability to address future energy security requirements, particularly in EGS
- Direct Use capability with potential to significantly displace the use of grid power, particularly in the Perth Basin and the Otway Basins
- Australian R&D leadership presenting vast jobs and export opportunities

² The Commonwealth's *Resource Assessment Report* by GeoScience Australia shows HSA and EGS to be the cheapest and amongst the cheapest generation technologies respectively and the cheapest overall baseload and emissions free technologies.

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Given the current stress on government budgets due in large part to the global finance environment, AGEA urges that these aspects be taken into account when funding strategies are being developed by ARENA and notes that the current Inquiry offers the opportunity to provide such direction.

Clause 30 of the Bill deals with the appointment of board members. Again AGEA notes the opportunity provided by the Inquiry process to set some priorities for the selection of board members. The nature of the geothermal energy industry differs from that of other renewable technologies for a number of reasons.

The upfront costs of accessing the geothermal resource in the early stages are comparatively high but the ongoing development and supply costs are low. The R&D activities required to improve certainties and reduce costs cannot be done in a laboratory setting and as previously mentioned, learnings come from drilling deep and expensive wells. In light of these differences, AGEA requests that the Committee give some consideration to providing direction to the composition of the Board.

Again, AGEA is pleased to be able to offer these comments and wishes the Committee well in its deliberations.

Yours sincerely

Susan Jeanes
Chief Executive
