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Renewable Energy Consulting

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Chair
Senate Economics Legislation Committee
Parliament House
CANBERRA ACT 2600

Dear Chair

RE: Inquiry into the Renewable Energy (Electricity) Amendment Bill 2009 and a related bill – QoN from Senator Milne regarding Off Grid power.

For the many Australians living away from the main electricity grids, including pastoral stations, indigenous communities, tourism operators and of course domestic residences, standalone power systems are a necessity.

Under the Renewable Remote Power Generation Programme (RRPGP), a financial incentive was offered to help offset the significant up-front cost barrier that prevented off grid power systems being converted to partially, or wholly, Renewable Energy (RE) based systems. An example of this is a typical primary producer in off grid Northern Territory who has an aging and failing diesel generator power system. The main options for replacement might be a new diesel genset or a RE (solar) system with diesel backup. While on paper the RE based system is by far the least expensive over the expected lifetime of the equipment (solar or diesel), the upfront cost is much greater. For a rural property with limited resources this often becomes the deciding factor.

Another factor that must be considered when looking at the RET legislation in regards to the off grid sector is that stand-alone systems cost more, compared to on grid systems, on a $/W (dollar per watt capacity) basis, due to the requirement for storage and control equipment. This is referred to as the balance of system costs.

Through an incentive program like RRPGP, while the upfront cost is still greater, the decision to go with an RE system becomes much more likely.

For an indigenous community or the rural poor, this upfront cost is an even greater barrier. They are stuck with high living costs to pay for LPG and petrol because the initial outlay for a solar system is beyond their reach. Anecdotal evidence is indicating that a large number of lower income people currently relying on diesel and / or LPG for energy needs in rural Australia were in the process of saving towards a clean RE based energy system, however with the demise of the RRPGP these people are now facing the prospect of having to finance the whole system.

The RRPGP had the key aims of: reducing usage of fossil fuels in rural Australia, to supply effective electricity supply to remote users, to grow the Australian RE industry and to support indigenous communities through reliable and cost effective energy supplies. Reviews of the program have consistently found that the program was highly successful in meeting these objectives, with emphasis on improving the living standards for those living in remote and regional Australia.

One of the greatest success stories of the RRPGP is the Bushlight program which has deployed more than 120 RE systems to Aboriginal communities. This program has won awards and is highly respected throughout the world.

The proposed RET legislation will not meet any of the stated aims, and success stories like Bushlight will be soon be rare.

Using the example above of the choice between the continued use of diesel or changing to an RE based system, the incentive offered under the RET model is somewhere in the vicinity of 20% of that offered under RRPGP[1]. Further, the RET model is based on energy generated, and consequently other aspects such as community energy education for indigenous communities (Bushlight) will receive no funding help under the RET.

The RET legislation is a significant and necessary requirement to grow Australia's renewable energy industry and the share of the nations energy sourced from clean, sustainable sources. However it fails to address all the needs of the energy sector, especially off grid. It is the opinion of many in the energy sector that supplementary programs will need to be developed to support the growth in the off grid sector, with similar aims to the RRPGP.

However the RET legislation can, with some small modifications, better support rural Australia.

To support system purchases in smaller scale applications, such as indigenous communities, pastoral stations and domestic dwellings, the REC multiplier can be used. The cap for the REC multiplier is currently set at a peak system design capacity of 1.5kW. When a system of this size is connected to the grid, it goes part way to offsetting the energy use of the building it is installed on. In the off grid situation a household cannot have only part of the energy use met by their power system, as there is no grid to source energy from. The system size needs be able to meet the total energy requirements of the user. To overcome this, the RET legislation could be amended to increase, for the off grid sector, the system size cap. To simplify the transition from the RRPGP to the RET multiplier, it is suggested that the same eligibility criteria be used as under RRPGP,

While this solution increases the issue of 'phantom' RECs being created (due to the multiplier RECs are created that do not represent 1 MWh of real generation), the same solution will apply for the off grid 'phantom' RECs as that for the on grid. A solution to the phantom RECs issue is beyond the scope of this document.

[1] This figure derived from modelling a virtual system of typical size, cost and output.

Recommendation 1: Increase the cap size under Solar Credits to 10kW

A similar amendment to the legislation could be applied to larger systems, such as those that would supply a remote community / town[2]. In this case it is suggested modelling be undertaken to determine a multiplier that takes into account the balance of system costs (the higher $/W cost of a system), the rising costs of the alternative energy source (diesel mostly) and the falling costs of RE equipment.

Recommendation 2: Review an appropriate Solar Multiplier level for the off grid market

While these recommendations will go some way towards providing incentives along the lines of the RRPGP, they are by no means a replacement for the RRPGP. The RET model only funds generation of electricity, and not the many other components that form part of a thriving and world leading renewable energy industry.

I hope this has provided some insight into the issues facing rural Australia since the demise of the successful RRPGP, and how the RET legislation may be amended to overcome these issues. Please do not hesitate to contact me if you should have any further questions.

Yours sincerely

Simon Troman

Managing Director

[2] e.g. Arlparra in the NT