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Climate Change Authority

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Submitted via email

Dear Sir/ Madam,

Hidro+ Technology submission to the Renewable Energy Target Review

The Hidro+ Technology Group welcomes the opportunity to provide this response to the Climate Change Authority's request for feedback on the Renewable Energy Target Review August 2012.

Hidro+ Generator is a patented Australian Renewable Energy Technology, the advanced engineering research and development has taken over a decade to complete and knowledge of the technology has been before the Australian Government for over five years. The Hidro+ Generator Technology development program has been privately funded without any government grants and is the only new technology in the world selected to exhibit at United Nations Framework Climate Change Convention Cop15 in Copenhagen and Cop17 in Durban.

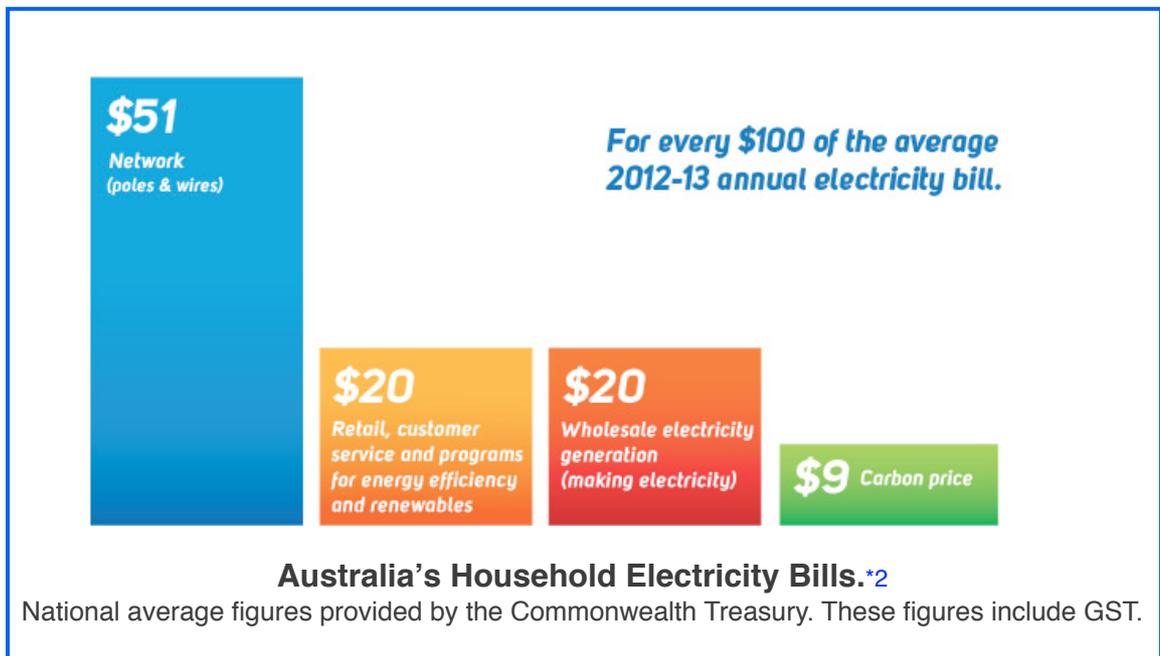
The Hidro+ Generator Technology is a highly innovative 24/7 Distributed Power system, this clean energy technology has been developed by Australian Engineers and its principles are based on pumped water storage and mass-energy transformations. The technology uses Hydrostatic Pressure Gradients naturally found in a column of water.

The aim of the Hidro+ Technology is to provide sustainable and affordable 24/7 Clean Energy Distributed Generation and opportunities for Australians to learn new skills for sustainability, to enhance existing skills, knowledge and practices using existing infrastructure to create high-value exports, allowing Australia to continue with its tradition of being viewed as a smart and lucky country through-out the world, therefore we welcome the opportunity to work in coherence with the Australian Government and Climate Change Authority to achieve our common aims.

☀ **Is a list approach to 'eligible renewable sources' appropriate?**

Having a fixed list approach creates a barrier for Australia to adapt to climate change and to provide affordable energy security for Australian families and businesses. A list approach fails to recognize the need for flexibility and innovation which is required to address climate change and also the effects of changing climate, affordable electricity generation for Australian families and businesses, reduce Australia's need for poles and

wires which contribute some 51% of the Australian Household electricity bill or to provide the opportunity to create as many green jobs for as possible for Australians.



The current list approach has been unable to produce the innovations necessary to lower household electricity bills and create innovative high-value export products for Australia's future economy while simultaneously addressing climate change.

For Australia to be a productive, smart country we should learn lessons from other countries, at their financial expense rather than repeating the same expensive mistakes in Australia. Germany's minister of Economy, Phillip Roesling, said in regards to the solar subsidy in Germany *"the subsidies have gotten too expensive for the government to sustain, and that they have also become a disincentive for competition. We are aware of all the disadvantages that come with subsidies,"* Roesling said recently. He says subsidies put the brakes on innovation, which is essential for German companies to stay competitive.¹

A list approach puts the brakes on innovation which is essential for Australian companies to stay competitive in an international market and in turn creates an immediate bias and unfair advantage towards traditional expensive and largely imported technologies. Australia must align itself in coherence with UNFCCC framework for Renewable Energy Certificates to allow Australia to competitively achieve international best practice, utilise the best available technologies to effect the transformation of Australia to a low carbon economy, in the most affordable manner whilst sustain our society, ecology while creating the long-term jobs in manufacturing that support the foundations of our economy.



Are there additional renewable sources which should be eligible under the REE Act?

Yes to encourage innovation and affordable energy supply in the market any form of energy from solar, geophysical or biological sources that is replenished by natural processes at a rate that equals or exceeds its rate of use. Renewable energy is obtained

from the continuing or repetitive flows of energy occurring in the natural environment should be eligible.

One example is the Australian patented Hidro+ Technology which has been before the Australian government for over five years. The Hidro+ technology uses Hydrostatic Pressure Gradients naturally found in a column of water. Hydrostatic-pressure is available 24/7 as its existence is a function of mgh (mass, gravity and height of a water column). Neither mass or gravity can be destroyed and in a closed-system, can be transformed into energy; its quantum is defined by mass x gravity over the exerted area. The Hidro+ Technology has already developed a large-scale semi-commercial plant and has been shown at the United Nations Conventions.

The Hidro+ technology, distributed power generation, could effectively elevate the significant network cost and could affordably replace the larger, aging, less efficient generators for Baseload power stations over time, this also "shares the wealth" in Australian employment and in turn will create the flow on effect for the communities of Australia in which the Hidro+ Generator Technology is manufactured and installed.

 **Should waste coal mine gas be included in the RET?
Should new capacity of waste coal mine gas be included in the RET?**

No because Waste Coal Mine Gas is not a renewable energy source and in order to avoid a mockery of the entire legislation and to be consistent with international framework, only forms of energy from solar, geophysical or biological sources that is replenished by natural processes at a rate that equals or exceeds its rate of use be eligible for RET.

 **What would be the costs and benefits of any recommended changes to eligible renewable sources?**

The benefit to change eligible renewable energy sources allows Australians the opportunity to protect the future productivity of the Australian economy, the continuing prosperity of Australian businesses and industries and continuing employment opportunities for Australians to effectively transit to a low carbon economy.

Australia no longer has any solar cell manufacturers. The only Solar cell manufacture Silex was unable to compete with the much cheaper Chinese imports and closed during the \$1.9billion in government grants Solar Panel Installation scheme.³

It is a well established fact that Australia manufacturing prices and labour cost are significantly higher than other international workforces and the only way Australia can truly afford to compete in the market place is through innovation.

The cost of changes to eligible renewable energy source is largely an Administrative cost for the Climate Change Authority, the DCCEE and regulator to be provided with clear guidelines allowing new innovative technologies to be processed in a timely and efficient manner by the department, as unfortunately this oversight has already cost a great deal of engineering time, legal teams time and government departments time due to the uncertainty of how to process such a request.

The changes must take place, especially as China, Australia's largest trading partner is slowly transitioning to a lower carbon and self-sustaining economy and is purchasing less coal. Australia has no solar cell manufacturers, nor exports any solar panels or wind turbines to China, USA, Japan, Germany, India, Russia etc nor does Australia have any reserves in the ground of the precious metals of indium or neodymium to sell to the international market, therefore Australia must provide opportunities for innovation outside the "traditional" sources of renewable energy to protect the future productivity of the Australian economy, the continuing prosperity of Australian businesses and industries in order to provide continuing employment opportunities for Australians.

 **Are the LRET accreditation and registration procedures appropriate and working efficiently?**

All renewable energy technologies should be required to undergo a merit system analysis to ensure that the LRET accreditations are granted to the technologies which provide the most significant benefits to the environment, Australian households, businesses and economy in regards to:

- What percentage of the technology is manufactured in Australia
- The sustainability of the renewable energy source?
- The replenishment rate of the renewable energy source. Is it every second, minute, hour, day, year, decade etc.
- Availability of renewable energy source
- Are there any "other" energy source required during periods the renewable energy source is unavailable?
- Is the project in the public interest
- What is the land mass required
- Does the technology produce any secondary emissions
- What impacts are placed on business, workers and communities
- What benefits are provided to business, workers and communities
- What is the comprehensive life-cycle analysis of water usage required (if any)
- The effects on ecology
- Comprehensive life-cycle analysis provided including all known upstream and downstreams for financial and environmental considerations
- Does the project utilise existing networks
- Does the project need to build extensive new transmission lines
- Is the technology a distributed power system.
- Distributed Renewable Energy Baseload Technologies should be strongly supported in efforts to reduce the 51% cost savings on Australian Household Electricity Bills.
- Commercial Readiness of the Technology
- Which country holds the Intellectual Property Rights of the technology
- Does the technology have any health hazards
- Can the technology meet peak load requirements

There should be a clear separation of Renewable Energy Sources consist with the IPCC definition and the technologies which mitigation of climate change low emissions with first preference of LRET be given to the projects which offer the most significant environmental and financial benefits and affordable clean energy security for Australian communities.

Conclusion

The stone age did not end because humans ran out of rocks it ended because humans used and created new technologies.

In the greater interest of the Australian Economy an eligibility restriction should be applied to renewable energy projects with a minimum of 65% of the projects components to be manufactured in Australia in order for any company to receive government grants and/or LRET in the greater interest of promoting an Australian manufactured clean energy industry, Australian innovation, green jobs, high value exports to share long-term wealth across Australia

Should you require any further information please do not hesitate to contact me as Hidro+ Technology group welcome the opportunity of working with the Australian Government to provide affordable clean energy security for Australia and high value exports to the world.

With Kind Regards

Katrina Pollard
on behalf of the Engineers and fabricators of Hidro+ Technology Group

References

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