T h e E n v i r o n m e n t A s s o c i a t i o n (T E A) I n c
Caring for Home ***Established 1990***

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4th August 2008

The Secretary,
Senate Standing Committee on Environment, Communications and the Arts,
PO Box 6100
Parliament House,
CANBERRA ACT 2600
By email to eca.sen@aph.gov.au.

Save Our Solar (Solar Rebate Protection) Bill 2008 [No. 2], together with related matters

Dear Committee Members

The Environment Association Inc is a voluntary, not for profit, regional; community based incorporated association with a focus on conservation and care for the environment.

Our membership includes people who install solar systems and whose systems mostly are not connected to the grid. Our purpose is not however to represent our members interests. We act in the public interest.

We wish to thank the committee for allowing our late submission and apologise for any inconvenience we may have caused. We welcome the opportunity to provide comment on this important topic. We consider it particularly important that a Commonwealth Senate committee is looking at this legislation and the program that will come under it.

We make comment about other matters that are not program-related and which would fall outside the legislation but are we believe within the scope of this enquiry.

There is an urgent imperative to act effectively over the threat of human induced climate change. We refer you to the enclosed article: “Two years to climate change meltdown” by Nicholas Shakespeare.

We are not convinced that the Government intends to put the necessary changes in place at this stage and can see that growth will make it much harder unless more serious measures are implemented.

In broad terms we support the legislation but feel that it is rather limited. It could be improved.

The Government’s view about the purpose of renewable energy programs can be seen from its website:

> *“Renewable energy is an essential part of Australia’s low emissions energy mix and is important to Australia’s energy security. It plays a strong role in*

reducing Australia's greenhouse gas emissions and helping Australia stay on track to meet its Kyoto target and beyond. Australian Government support for renewable energy assists industry development, reduces barriers to the national electricity market, and provides community access to renewable energy."

We agree that renewable energy should be an essential part of Australia's low emissions energy mix but do not consider that it currently is. For it to be so strong incentives must be developed, implemented and actively promoted. We note that there are several renewable energy programs which should be playing a "strong role". In our view the individual programs need to become more focused on the goals and strategic intent of the government in this area. What is that? We find little strategy explained and the specific targets absent and perhaps this is because there is little strategic planning in this important area. We perceive that Government is yet to do that work.

Our view is that the legislation should be amended to include a commitment to strategic planning for renewable energy, not only for this particular scheme but also for the suite of schemes and indeed for others not yet conceived regarding renewable energy. Australia is the Sunny Country: let's use it, not lose it.

Further developing a cohesive renewable energy strategic plan for Australia would assist both the government and the community, assuming community consultation, in moving together in the urgent and difficult battle against climate change. Our survival depends on winning that battle.

Energy use in the Australian residential sector 1986-2020

We are aware of the publication: Energy use in the Australian residential sector 1986-2020 by Department of the Environment, Water, Heritage and the Arts, 2008. An extract of the executive summary is alarming:

"Main findings

Between 1990 and 2020 the number of occupied residential households is forecast to increase from six million to almost 10 million, an increase of 61%. Over the same period, total residential floor area is set to rise from 685 million square metres to almost 1682 million square metres, an increase of 145%.

The study estimated that the residential sector energy consumption in 1990 was about 299 petajoules (PJ) (electricity, gas, LPG and wood) and that by 2008 this had grown to about 402 PJ and is projected to increase to 467 PJ by 2020 under the current trends. This represents a 56% increase in residential sector energy consumption over the period 1990 to 2020. This increase coincides with a continuing trend towards an increased proportion of the total residential energy demand being met by electricity (which currently has a high greenhouse gas intensity) and a decrease in the use of wood (with a low greenhouse gas intensity). Although this study does not calculate the greenhouse emissions, it is likely that this predicted growth in energy use in the residential sector will result in a significant growth in greenhouse gas emissions.

Since 1990 the average energy consumption per Australian household has remained relatively constant apart from the influence of year-to-year climatic and weather variations that impact significantly on space conditioning energy demand. Projecting forward to 2020 there is expected to be about a 6% decline in energy consumption per household compared to 1990 levels. This decline is achieved despite expected increases in service delivery to households, particularly in terms of increases in the average size of houses and the types of space conditioning equipment and in a diverse range of appliance types, such as larger, more power-intensive televisions and an increase in standby energy consumption, lighting, computers and other home entertainment. The decline in energy consumption per household is primarily being driven by existing and planned energy programs designed to improve energy efficiency of appliances and the building shell.

The trend in per person residential energy consumption shows a steady but modest increase from 17 gigajoules (GJ) per person in 1990 to 20 GJ per person in 2020, or approximately a 20% increase over the study period. This increase in energy consumption per person is partly being driven by a decline in the number of persons per household, as there are some forms of fixed energy consumption that are associated with each household."

We encourage committee members to read this report, as it is very relevant.

Clearly such problematic baseline predictions of unsustainable development require to be addressed by way of a more strategic approach and will demand a massive expansion of renewable energy if climate change is to be mitigated. The Commonwealth states:

'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'

Clearly with a dangerous climate change situation upon us, urgent action is required now to make Australia sustainable. The renewable energy programs obviously support sustainable development but we argue they must clearly be expanded to effectively and successfully meet the challenge.

We have made comments on issues within the terms of reference below: Save Our Solar (Solar Rebate Protection) Bill 2008 [No. 2], together with the following matters:

a. the impact of the means test threshold of $100,000 on the $8,000 solar rebate per household on the solar industry;

The means test does not support the purpose of the renewable energy programs. We favour the abolition of the means test. Alternatively, if that was unacceptable, we would recommend raising the cut off point to $200K and a multiple tiered rebate with a means test that ensures low income earners have a

higher level of assistance than currently. Even with the likely introduction of Feed In Tariffs (FIT) there would be a barrier to low income earners and it remains to be seen how a FIT would work and what its impact would be within the next five years.

b. the effect on the uptake of solar panels by Australian households, comparing state-by-state results;

We comment that Tasmania has a higher off-grid percentage installation than grid connect and is the only such state. We find it interesting now that Basslink is delivering dirty brown coal energy to Tasmania, that a greater uptake of grid-connected systems has not occurred. Hydro storages are at an all time low and it seems the dependence on Basslink may otherwise continue. Grid connected photovoltaic systems in Tasmania should be encouraged.

c. the impact on the number of applications for the $8,000 since the budget decision to impose the means test;

The information on the EA website is not sufficient to allow a meaningful analysis. What are the causal factors of the variation in uptake and do those figures represent a six-month application lag?

d. the impact on jobs in the solar industry, comparing state-by-state results;

We consider there are not enough solar installers in Tasmania meaning there is a significant backlog of installations. We are aware of industry claims that the means test has caused an industry downturn on mainland Australia. This must surely be regarded as a fledgling industry requiring consideration and encouragement to ensure it is not damaged by ad hoc decisions.

e. the impact on emissions reductions as a consequence of this decision, comparing state-by-state results;

If the Government is interested in emissions reductions it will get rid of the $100K means test tomorrow. It will also get rid of the 1Kw cap as relates to the installed array wattage subsidy of $8.00 per watt. That is, we suggest abolishing the $8,000 limit. It is incomprehensible that there is a 1Kw cap on the subsidy when the intent is to reduce emissions.

Our view is that the task of reducing emissions is a difficult one (in the face of growth) and that the government should view solar renewable technology as highly important. Thus we advocate a redesign of the scheme and a loosening of the reigns. That should mean revisiting the overall budget and expanding the programs.

f. the consultation that occurred within government, including departments and agencies, prior to the decision and the input of each department and agency on the measure;

We are unable to comment.

g. the economic and environmental modelling underpinning the decision to impose the means test;

Clearly Australia has a massive need to expand the use of solar energy and reduce the reliance on coal as quickly and as durable as we possibly can. What does economics have to do with meeting the Kyoto targets?

h. the extent of the discussion prior to the decision with the solar panel industry on the impact of the decision;

Unable to comment.

i. the future viability of, and effects on, the solar industry as a result of the means test;

We favour an expanding and expanded industry based on renewable energy. We consider that continuing this program without the various caps will act as a medium term incentive to expand as long as there is consistency that industry can rely upon.

j. the impact on the Solar Cities programs at various sites around Australia and other related programs; and

There is very little information about solar cities program and seemingly no strategic integration. Almost every city in Australia could be a solar city, even southerly ones like Hobart. Hobart is very sunny. Australia is very sunny.

k. other relevant matters.

There are several relevant matters:

Electricity in Australia and system losses

Electricity - production:	236.7 billion kWh (2005)
Electricity - production by source:	fossil fuel: 90.8%
	hydro: 8.3%
	nuclear: 0%
	other: 0.9% (2001)
Electricity - consumption:	219.8 billion kWh (2005)
Electricity - exports:	0 kWh (2005)
Electricity - imports:	0 kWh (2005)

https://www.cia.gov/library/publications/the-world-factbook/print/as.html

The difference is the transmission loss as given below with other ‘losses’ in the centralized system.

The low contribution of solar can be seen.

In 2006 Australia's power stations produced 255 billion kilowatt hours (TWh) of electricity*, 65% more than the 1990 level and growing at 3.3% per annum.

* 243 TWh public supply + 12 TWh for non-grid auto producers.

Of this gross amount, about 18 TWh is used by the power stations themselves, leaving 237 TWh actually sent out (net production). Then about 17 TWh is lost or used in transmission and 9-10 more in energy sector consumption, leaving 210 TWh for final consumption (or 187 TWh apart from aluminium exports).*

> * Vencorp suggest that typically net TWh are about 10% less than gross TWh, with transmission and distribution losses often being 10%.

In 2005 the electricity was produced from 50.6 gigawatts (GWe) capacity, of which 57% is coal-fired, 20% hydro and 18% gas.

In Victoria the main fuel is brown coal (lignite), in NSW and Queensland it is high quality black coal and in WA and SA it is much lower quality black coal.

> http://www.world-nuclear.org/info/inf64.html

These are figures used in many publications. Note that the total lost is 45 TWh in the centralized system.

We consider the electricity grid is an expensive entity in terms of its own consumption and in the transmission losses of running the grid.

Transmission losses for isolated users should be considered as a factor in judging if a person should have a stand alone not grid connected system (we are aware of the current guidelines in the Renewable Remote Power Generation Programme). In our view the grid should only be expanded after careful consideration of the alternatives. It should not be an automatic right (of a user) dependant simply on paying the cost.

There is substantial benefit to be gained from grid connected renewable energy across the grid and away from base load power generation. Other countries have achieved such distributed generation capacity and yet many of these countries are much smaller than Australia and hence the distribution costs are less.

Consumption Reduction NOT Currently Encouraged

The scheme does not actually encourage a reduction of electricity energy consumption. A purchaser could simply use the additional generation as a means of reducing the bill whilst consumption is increased. This is a matter that needs to be addressed urgently. A FIT, which has set as a part of the scheme a tariff rate above the retail price, may well solve this problem.

Remote Power Scheme

The scheme for supporting the non-connected user to move from, say diesel, to a low carbon system should remain in place. Water pumping is an energy intensive rural issue that needs more attention and which is a mitigation opportunity. A major projects program is obviously urgently needed.

Feed in Tariffs

In Tasmania the feed in rate is effectively capped at 3Kw, above that the price becomes miniscule. Such arcane arrangements need to be fixed.

We strongly favour and support legislation to create a national Feed In Tariff and consider that market forces geared to corporate profits should not hold sway but that a tariff be regulated.

Government Buildings

A program to convert Government Office Buildings to renewable energy should be put in place. Many have very sunny roofs. The solar schools program is a great idea.

Solar Hot Water

The subsidy of solar hot water installations, which is the subject of a separate rebate, should also be overhauled and expanded.

Currently it excludes converting LPG to solar, for example. LPG is a non-renewable carbon gobbler yet the scheme is limited to replacements of electric systems only. Such narrow guidelines need to be rethought. Diesel power vehicles deliver all County LPG, of course.

Overall our perception is that people do not understand the benefit of solar hot water on their electricity bill and on the reduction in consumption of polluting climate warming coal-based electricity. More clear policy signals are needed.

The Government could have a plan to ensure that every house in Australia has solar hot water installed. It could also ensure that it is mandatory (via building codes) that every new building must install a solar hot water service. Solar hot water would then achieve significant energy savings over coal-fired power stations.

A much larger up front ‘subsidy’ could apply with a payback via the electricity tariff at no interest for retrofitting solar hot water on domestic buildings. They could be free up front. A goal to have 80% of Australian homes with solar hot water by 2015 seems sensible to us. This is substantially beyond the current predictions.

The Six-Month Installation Requirement

Our view is that the six-month requirement to complete an installation is overly restrictive and see no useful purpose in such a restriction. Developments are becoming more complex with more regulations to be met and the time frame is unrealistic.

In Conclusion

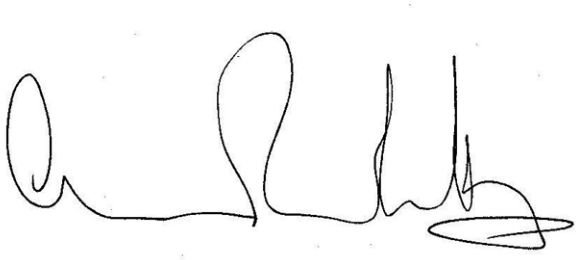
The installation of renewable energy by private Australians is an act in the public interest and the support schemes should be based on acknowledgment of that fact. People who make the change are working to mitigate our massive and harmful dependence on coal-fired electricity generation, which continues to grow. A person’s income is not a relevant consideration in such a circumstance.

Australia the Sunny Country should consider that overseas countries, especially Germany and Japan, have a far higher installation of renewable solar technology per capita. We have yet to capitalise on Australia’s sunny advantage. Meanwhile

the effects of climate change wreak havoc on our, environment, agricultural systems and water availability.

Barriers to the transition to a low carbon economy must be removed. We urge much greater investment in and encouragement of renewable energy by the Government now.

Yours faithfully



Andrew Ricketts

Convenor