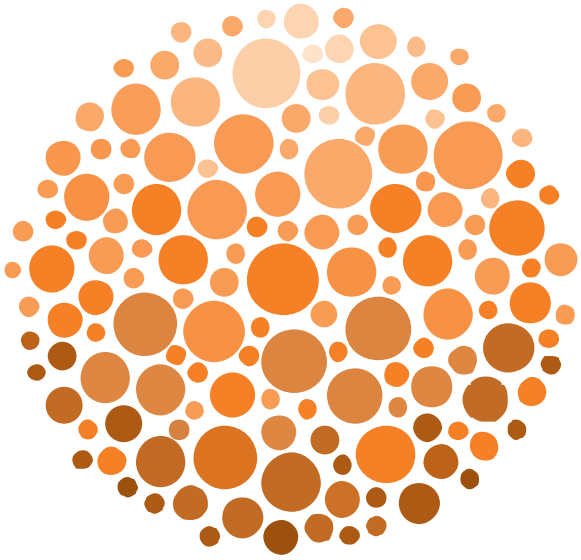

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Review of the Renewable Energy Target

Submission by Energetics

Description	Prepared By	Reviewed By	Approved By	Approval Date
Submission	Evan Beaver	Gordon Weiss / Andrew Tipping	Tony Cooper	14/09/2012

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Energetics is a specialist management consultancy in the business of climate change. In partnership with our clients, we help them transition to a carbon-constrained environment by managing risks, achieving cost reductions and identifying new opportunities. For over 25 years, Energetics has been providing clients with competitive advantage from the top to the bottom line.

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Question Number	Question	Comments
Large-scale Renewable Energy Target.		
1	Are the existing 41,000 GWh LRET 2020 target and the interim annual targets appropriate? What are the implications of changing the target in terms of economic efficiency, environmental effectiveness and equity?	In the absence of a rigorous review of the future national energy mix, the existing targets are appropriate. It can be argued however, that Australia should assess its power generation options for the future and ensure that the outcomes driven by the RET are consistent with longer term objectives.
2	Is the target trajectory driving sufficient investment in renewable energy capacity to meet the 2020 target? How much capacity is needed to meet the target? How much is currently committed? Has the LRET driven investment in skills that will assist Australia in the future?	Current analysis suggests that there will be adequate RECs generated from new wind-farms across Australia to meet the target. The more important question is whether incentivising the widespread deployment of utility scale wind farms is an appropriate outcome for the large investment that Australian energy users are making. In deploying a large number of utility scale wind farms, Australia will certainly increase capacity to generate renewable energy but may not make significant progress towards a sustainable energy mix. Other technologies such as renewable dispatchable power generation or low cost energy storage are not being incentivised by the LRET and yet will be required for a sustainable energy mix. The LRET has resulted in an investment in skills that will assist Australia in the future. These skills are primarily in the scoping, design and construction of wind projects, using off-the-shelf turbines. Skills and significant IP were also generated during the Wind Energy Forecasting project, run by the Department of Resources, Energy and Tourism and the CSIRO.
3	What do you consider to be the benefits and costs of harmonisation of existing state schemes? Are these greater or smaller than a single national scheme?	A national scheme will always offer lower cost outcomes than a collection of smaller state-based schemes. Also, the different state-based schemes create confusion in the community and lead to inaction and higher costs.

Question Number	Question	Comments
4	In the context of other climate and renewable policies, is there a case for the target to continue to rise after 2020?	Energetics believes there will be a need over next few decades to change the mix of energy sources. The economics of fossil fuels will become less favourable (with or without a price on greenhouse emissions), and there is no guarantee that market forces alone will act sufficiently quickly to prevent energy price shocks. The role of the RET is to drive investment in renewable generation, which will provide a platform for a smooth transition to a generation mix less dependent upon fossil fuels.
5	Should the target be a fixed gigawatt hour target, for the reasons outlined by the Tambling Review, with the percentage being an outcome?	Energetics favours a fixed target as it provides certainty for the investment community.
6	Should the target be revised to reflect changes in energy forecasts? If so, how can this be achieved? As a change in the fixed gigawatt hour target, or the creation of a moving target that automatically adjusts to annual energy forecasts How should changes in pre-existing renewable generation be taken into account? What are the implications in terms of economic efficiency, environmental effectiveness and equity?	It should be a single fixed target. The 20% figure, which was the basis of the 41 TWh target was arbitrary anyway and we don't feel there is a sound case for changing it.
7	What are the costs and benefits of increasing, or not increasing, the LRET target for Clean Energy Finance Corporation funded activities? What are the implications in terms of economic efficiency, environmental effectiveness and equity?	The LRET target should not be changed to account for CEFC funded activities. However, Energetics believes that the CEFC should not fund activities that are already viable within the LRET.

Question Number	Question	Comments
10	Is the shortfall charge set at an appropriate level to ensure the 2020 target is met?	It appears that the target will be met irrespective of the shortfall charge. However, should the current target change significantly, the shortfall charge should be reviewed within the context of the generating technologies chosen to be incentivised. The penalty should be greater than the levelised cost of electricity (LCOE) for the chosen technologies.
15	Is a list approach to eligible renewable sources' appropriate?	Energetics believes that the regulations should specify technologies that are to be excluded rather than list included technologies.
16	Are there additional renewable sources which should be eligible under the REE Act?	Energetics believes that the regulations should only specify technologies that are to be excluded.
17	Should waste coal mine gas be included in the RET? Should new capacity of waste coal mine gas be included in the RET?	No, neither existing nor new waste coal-mine gas activities should be eligible for RECs. Supporting coal waste gas projects will not drive change to a low carbon-emissions electricity sector. The carbon price should be adequate to drive behaviour that reduces mine emissions.
18	What would be the costs and benefits of any recommended changes to eligible renewable sources?	No changes recommended.
19	Are the LRET accreditation and registration procedures appropriate and working efficiently?	Yes. The approval process through ORER is appropriately complex, in a field that requires detailed regulation and compliance.
Small-scale Renewable Energy Scheme		
20	What do you consider to be the costs and benefits of having a separate scheme for small-scale technologies?	With the current costs of generating equipment, separating small-scale technologies from large-scale technologies is effectively a proxy to support roof-top PV instead of grid wind. If this is the desired policy outcome, separating the schemes is too blunt an instrument and discourages large scale solar PV investment.

Question Number	Question	Comments
21	Should there continue to be a separate scheme for small-scale technologies?	No. Separating the schemes is unlikely to change the generation mix. Costs for solar PV are still falling and solar will be cost-effective in many on-grid distributed generation applications in the near future. Other small-scale distributed generating technologies are less likely to be supported in the near term as they are much more costly. Removing the barrier between centralised wind (currently supported by the LRET) and de-decentralised solar PV (currently supported by the SRES) allows these two technologies to compete for a more cost-efficient overall solution.
22	Is the uncapped nature of the SRES appropriate?	We believe that the SRES and LRET should not be separate. Beyond this, there is no case for capping the SRES.
23	What do you see as being the costs and benefits of an uncapped scheme in terms of economic efficiency, environmental effectiveness and equity?	An uncapped scheme has the potential to drive rapid take-up in small scale (residential) solar PV. This brings with it a number of benefits and some costs. In particular, solar PV as a representative of decentralised generation can address the challenges currently faced with respect to the heavy investment in network infrastructure. However, decentralised generation can have significant impacts on network stability and also on network charges.
24	Is the SRES driving investment in small scale renewable technologies? Is it driving investment in skills?	The SRES is largely driving skills development in the deployment of roof-top PV rather than small-scale renewable technologies in general. It does not appear to be leading to the development of IP in Australia.
25	What is the appropriate process for considering and admitting new technologies to the SRES?	The test for admitting new technologies to the SRES should be whether or not the device produces electricity from renewable energy sources. No new displacement technologies should be considered or admitted to the program.
27	Is it appropriate to include displacement technologies in the SRES?	No. If the intent of the RET is to drive change in the generation mix then displacement technologies will not achieve this. The carbon price should eventually provide adequate incentive for displacement technologies.

Question Number	Question	Comments
28	Should additional eligible technologies under the SRES be limited to generation technologies?	Yes. This will drive change in the electricity generation mix, while the carbon price will reduce emissions.
29	Is deeming an appropriate way of providing certificates to SRES participants?	Yes. Small investors will be more likely to require the capital up front to complete a project. Without deeming the paperwork burden on smaller generators is disproportionate to the reward.
31	What are the lessons learned from the use of multipliers in the RET? Is there a role for multipliers in the future?	Using multipliers appears to have distorted the market too severely and led to uncertainty for investors and businesses. Multipliers should not be considered in the future.
34	Is $40 an appropriate cap for small-scale certificates given the recent fall in cost of some small-scale technologies, particularly solar PV?	The $40 cap on small certificates will become less relevant as the costs of solar PV come down, so no comment is provided on the current cap.

Question Number	Question	Comments
Diversity of renewable energy access		
36	Should the RET design be changed to promote greater diversity, or do you think that, to the extent that there are barriers to the uptake of other types of renewable energy, these are more cost-effectively addressed through other means?	Energetics believes that Australians should expect more than just a number of large wind farms for their investment in supporting renewable energy. Wind turbines are currently the cheapest form of utility scale renewable generation. However, it appears unlikely that wind costs will come down much further as wind power is a mature technology, and land and construction materials comprise most of the costs. While not presently as cost effective as wind, solar generation technologies have demonstrated consistent cost reductions in recent years, with capacity for further reductions as new products proceed along the innovation pathway. The carbon price will not drive this development as it is unlikely to be high enough in the mid-term to make new solar technologies cost-competitive. The temporal nature of renewable technologies such as wind means that they can never wholly substitute for the current generation mix. Therefore consideration should be given to changes in the RET to also incentivise investment in energy storage systems. However, this should not be done in an ad hoc manner. Energetics believes that Australia should begin to debate the likely energy mix several decades into the future, looking at the technologies employed, the balance between centralised and de-centralised power generation, and the configuration and roles of the transmission and distribution networks. The RET should then be redesigned to promote developments that are consistent with Australia's long term goals.
37	What would be the costs and benefits of driving more diversity through changes to the RET design?	We have already expressed our belief that Australians should expect more from the RET than just the widespread deployment of wind farms. Diversity could be readily pursued by a move to an auction based scheme rather than a trading system. An example of the former is the ACT Government's Solar Auction program.

Question Number	Question	Comments
Review Frequency		
38	What is the appropriate frequency for reviews of the RET?	Energetics has no view.
39	What should future reviews focus on?	Whether the RET has been a cost-effective means of driving change in the electricity generation sector. Future reviews should also seek to demonstrate that the RET is reducing the emissions intensity of grid electricity and that power generated from renewable energy sources has led to reductions in the consumption of fossil fuels.

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