Submission to:

Renewable Energy Target Review

Climate Change Authority

September 2012

Introduction and background

Vestas Australian Wind Technology Pty Ltd is the local subsidiary of Vestas Wind Systems A/S, the world's largest manufacturer of wind turbines. We welcome the opportunity to make a submission to the Renewable Energy Target (**RET**) review.

Vestas is the world's leading supplier of wind power solutions, having installed more than 41,000 wind turbines in 69 countries across the globe. Worldwide, Vestas employs more than 20,000 people in the design, manufacture, sales, installation, operation and maintenance of wind turbines. While the home country of Vestas is Denmark, we have significant operations all across the world and we are experienced in comparing policies and regulations in all our markets.

In Australia we have been responsible for the supply of more than half of the wind energy capacity to date, including the 420 MW Macarthur Wind Farm in south-west Victoria, which will become the largest wind farm in the southern hemisphere once it is commissioned in early 2013.

Vestas is a member of the Clean Energy Council (**CEC**), and in addition to our own submission we would also refer the Climate Change Authority (**CCA**) to the CEC's submission to this review.

Wind energy in Australia

Over the past decade in Australia, the wind energy industry has grown substantially in almost all states and territories, to the point where more than 2000 megawatts of installed wind capacity is now operating.

Many more wind energy projects are currently awaiting investment decisions or are in the respective planning systems operating in the various states around Australia.

The major reason for the industry's growth has been the RET, which has driven most of the investments in wind energy in Australia since 2001. The decision in 2009 by the Australian parliament to lift that target to 20% by 2020 will continue that growth over the next decade.

The other key driver behind this growth has been the policy imperative for all nations around the world to cut greenhouse emissions in an effort to reduce the impact of climate change. Wind power is the most cost-effective form of renewable energy, and is forecast to retain this status for many years to come.[1]

Terms of reference

The list of questions for the RET review cover four main topics:

- Large-scale Renewable Energy Target (LRET)
- Small-scale Renewable Energy Scheme (SRES)
- Diversity of renewable energy access
- Review frequency

The Vestas submission will address many of these matters, although given our business is focused on utility-scale wind energy our responses will focus primarily on

[1] See, for example, p.206 of *Draft Energy White Paper 2011: Strengthening the foundations for Australia's energy future* (Commonwealth Government, 2011)

the LRET and will not provide much commentary on the SRES. However, for a more comprehensive response to the full range of questions we would refer the CCA to read the CEC submission to this review.

Answers to specific questions raised by CCA

Large-scale Renewable Energy Target (LRET)

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?

Vestas strongly supports the current LRET in its current form and does not propose any changes to the annual targets or to the overall 2020 target of 41,000 gigawatt hours.

We have noted some commentary that suggests recent downward revisions in forecast for electricity demand in 2020 should prompt a consequent reduction in the LRET.

We note in particular the recent claim from one energy industry executive that a fixed gigawatt hour target that may ultimately see Australia's proportion of renewable energy exceed 20% in the year 2020 is "*not what I believe most people signed on for*[2]."

That statement above is completely false. At the 2007 federal election, the incoming government's policy was to ensure "*A Rudd Labor Government will ensure that the equivalent of* ***at least*** *20 per cent of Australia's electricity supply – approximately 60,000 gigawatt hours (GWh) – is generated from renewable sources by 2020 as part of Labor's comprehensive approach to tackling climate change*."[3]

That policy was later endorsed by all major parties in the Parliament of Australia in 2009 when the RET legislation was passed.

When Ministers Wong and Combet announced the 2010 reforms to split the RET into the LRET and SRES, they said "***These changes are expected to deliver more renewable energy than the original 20 per cent target*** *and will ensure we build the clean energy future Australia needs."*[4]

Not at any stage in any of those debates since late 2007 have either of the two major political parties or their representatives in the Parliament of Australia suggested that the 20% target should operate as a cap. That suggestion is a new one, and is a misrepresentation of the facts and the clearly expressed intention of the Parliament.

In addition to this, such suggestions for changes to the LRET would exacerbate sovereign risk and increase uncertainty over energy policy. These changes would come at a time when the energy industry is already facing heightened risk and uncertainty over energy policy.

A recent survey published by the Australian Industry Group suggests that climate policy uncertainty is already starting to impact business investment in

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[2] "*RET to trump carbon slug on power bills, says Origin*" Sid Maher, *The Australian*, 10 July 2012, p. 6

[3] "*Labor's 2020 target for a renewable energy future*" Election 2007 policy document, Australian Labor Party, October 2007

[4] "*Enhanced Renewable Energy Target Scheme*" Joint Media Release, Senator Penny Wong and Greg Combet MP, 26 February 2010

energy efficiency and greenhouse gas abatement projects[5]. Industry research suggests that this uncertainty is a growing concern for foreign investors and that it has also led banks to charge a premium on loans for energy projects[6].

Policy uncertainty and instability has a cost, and that cost is ultimately passed on to electricity consumers in the form of higher tariffs.

It also sends a signal to investors that Australia is not the stable and predictable place for energy investment that it once was. This problem was neatly summarised by a spokesman for International Power – GDF Suez recently[7]:

> *"Over $6 billion of investment has to date been made in renewable generation and investors (both Australian and international) have relied on the RET legislation remaining in full force and effect. Stable legislation (and regulation) is required for large scale capital intensive infrastructure whether this is renewable generation and/or fossil-fired generation. If legislation is changed, then it sets a worrying precedent that the legislative/regulatory goalposts will be moved again and again over the next 20 to 30 years."*

Investments in power generation assets are long-lived, and are not made lightly. Energy policy plays a significant role in deciding which kinds of assets are built, and it can play a significant role in improving or damaging the investment environment. Accordingly, the prospect of any changes to the RET so soon after the June 2010 reforms are of major concern to all serious investors in the renewable energy sector.

Unless the advocates of changes to the RET can clearly demonstrate that the objectives of the RET legislation are not being met by the current scheme design, their proposals should be dismissed summarily so that the broader investment community can get on with the job of meeting the target and building the infrastructure required in the timeframe that has been set out.

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?*

Investment under the LRET has been lower over the past several years than was once expected, largely because of relatively lower certificate prices driven by the continuing overhang of certificates generated from solar PV and solar hot water prior to the separation of the RET into large- and small-scale components. Thus while the existing targets have been easily met, it will be challenging to approve, construct and commission sufficient new capacity to meet the 41,000 GWh target in just eight years. This is particularly so if unduly tight State and local planning practices rule out substantial resources from development. Adjustments to the policy that decrease investor confidence would make this capacity harder to build. If the targets are missed,

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[5] "*Energy shock: confronting higher prices*" Australian Industry Group, February 2011

[6] "*An analysis of Australia's Large Scale Renewable Energy Target: restoring market confidence*" Tim Nelson, James Nelson, Jude Ariyaratnam and Simon Camroux, September 2012

[7] "*Battle lines harden as the carbon tax debate lives on*", Sid Maher, *The Australian*, 13 July 2012, p. 4.

the main consequence would be that retailers pay, and pass on to their customers, a penalty for any shortfall until such time as further capacity is constructed. This situation is worth avoiding.

In terms of skills development, Vestas alone has more than 200 staff who have been trained in various aspects of wind farm development over the past decade. These include electrical engineering, project management, working at heights, safe systems of work and performance and diagnostic analysis.

Many staff have been trained by Vestas in Australia and have gone on to opportunities overseas while the renewable energy market here has been suppressed by various policy-driven issues in recent years.

In addition, Vestas has more than 300 suppliers in rural Australia that participate in the wind energy value chain. Those businesses keep wind farms running smoothly, ensure they are operating safely, provide transport, meals and accommodation for our employees, and contribute to the overall economic boost of the kind also described in the industry-wide Sinclair Knight Merz analysis released by the CEC earlier this year[8].

3. In the context of other climate and renewable policies, is there a case for the target to continue to rise after 2020?

Vestas does not support an increase in the target at this stage. The most important thing to investors in the renewable energy sector is stability of policy, particularly against the background of the numerous changes in this area in recent years.

Renewable energy technology costs have continued to fall throughout the past decade and there is every indication that this trend will continue. The recently issued BREE report[9] contains a number of projections that suggest wind energy and solar PV will soon have a lower cost of energy than fossil fuels. In such circumstances the current design of the LRET would see the price of Large-scale Generation Certificates (**LGC**s) fall from their current levels and reduce the costs of the RET to electricity consumers.

4. Should the target be a fixed gigawatt hour target, for the reasons outlined by the Tambling Review, with the percentage being an outcome?

Vestas supports the retention of the current fixed gigawatt hour target in the strongest possible terms. As the question itself indicates, the issue of whether the RET should be set as a percentage or as a gigawatt hour target has been considered previously. The Parliament of Australia has voted – three times, in 2000, 2009 and again in 2010 – to support a fixed gigawatt hour target. Similarly, the Tambling Review also considered the issue and recommended a fixed gigawatt hour target.

The choice of a headline percentage-based target is to a significant extent arbitrary, and the choice of a fixed gigawatt hour target to match the percentage goal is necessarily based on point estimates of future

[8] "*Wind Farm Investment, Employment and Carbon Abatement*" Sinclair Knight Merz, July 2012

[9] "*Australian Energy Technology Assessment 2012*" Bureau of Resources and Energy Economics, Australian Government, August 2012

consumption. The fixed gigawatt hour target itself, however, then becomes a stable basis for investment decisions.

Changing the target to a percentage-based target, which would bounce up and down in line with fluctuations in demand, would adversely impact market certainty and may well increase costs to energy users by raising risks, and hence financing costs, for renewables proponents, and by increasing the likelihood that shortfall charges are incurred.

5. ***Should the target be revised to reflect changes in energy forecasts? If so, how can this best 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?***

As mentioned above, Vestas does not support any changes in the target at this stage – neither upwards or downwards. The main reason we have taken this position is to try to establish some policy stability for investors, and to meet the objectives of the RET legislation.

As noted above, an ongoing adjustment process for the current target is likely to undermine confidence and raise costs.

Similarly, Vestas does not support any changes to the baselines that are part of the LRET. Again we take this position because of the importance of maintaining policy stability to give investors the confidence to proceed with projects.

6. ***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?***

Vestas has previously indicated (to the Treasury consultation of the Clean Energy Finance Corporation design) that we held concerns that CEFC-funded projects may act to displace investments that would otherwise have been made in renewable energy projects in the absence of the CEFC and impose a dead-weight loss upon the economy.

However, given that the CEFC is yet to start its operations and faces significant political risks of its own (namely, the lack of bipartisan political support for the CEFC), we see this as only a residual concern rather than a clear and present risk to LRET-driven investments.

Accordingly, Vestas does not support the idea of increasing LRET targets to account for CEFC-funded activities.

7. ***Is the calculation of individual liability using the Renewable Power Percentage the most appropriate methodology?***

No comment.

8. Is it appropriate to set the Renewable Power Percentage by 31 March of the compliance year?

No comment.

9. Is the shortfall charge set at an appropriate level to ensure the 2020 target is met?

Vestas does not consider that the current level of the shortfall charge needs to be any higher to ensure that the 2020 target is met. Any change to the shortfall charge would need to be made via legislation, which would be time-consuming and would add political risk to the business case of projects being considered by investors during 2013.

We see the main threats to the achievement of the 2020 target being:

- Policy uncertainty caused by this review, including anecdotal reports of CCA staff floating the idea of re-aggregating the LRET and the SRES into a single scheme, thus unwinding the June 2010 reforms passed by the Parliament of Australia;
- State Government planning policy changes that increase the cost of building wind farms;
- Absence of any reference to the RET in the National Electricity Law, particularly in the National Electricity Objective; and
- Lack of transmission capacity, and/or congestion on the transmission system in parts of Australia where the best renewable energy resources are located.

10. Are there other issues relating to the liability or surrender framework the Authority should consider?

No comment.

11. What are the costs and benefits of the current exemption arrangements? Are they appropriate?

The current exemptions under the RET have the effect of reducing compliance costs for a small number of large electricity users, thus transferring these costs to the rest of the economy. The exemptions by definition have some unfortunate equity issues but Vestas does not propose any amendments to the RET legislation.

12. The self-generator exemption pre-dates the emissions intensive, trade exposed partial exemptions – are both required? If so, why?

No comment.

13. What, if any, changes to the current exemption arrangements should be made? What would be the impact of those changes on directly affected businesses and the broader community?

Vestas does not propose any amendments to the RET legislation. The costs of the RET to individual electricity consumers are modest, so the benefits to non-exempted electricity consumers of any changes in this regard would be likely to be wiped out by the increased costs of uncertainty for investors while any such legislative changes were debated.

14. Is a list approach to 'eligible renewable sources' appropriate?

No comment.

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

Vestas does not support any changes to the RET legislation as this process will impose additional costs and delays upon investors and consumers.

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

Vestas does not consider that waste coal mine gas is a form of renewable energy. However, it has been included in the RET as an eligible renewable energy source to provide transitional assistance for waste coal mine gas-based generation projects that would be affected by the introduction of a carbon price and cessation of the NSW Greenhouse Gas Reduction Scheme. As this is now in legislation, Vestas does not support any changes to the legislation as this process will impose additional costs and delays upon investors and consumers.

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

Vestas does not support any changes to the RET legislation. As we have stated above, the mere process of making amendments to the RET legislation will impose additional costs and delays upon investors and consumers. The cost of this uncertainty is better explained and documented in the most recent paper from AGL's economics team[10].

18. Are the LRET accreditation and registration procedures appropriate and working efficiently?

No comment.

Small-scale Renewable Energy Scheme

19. What do you consider to be the costs and benefits of having a separate scheme for small-scale technologies?

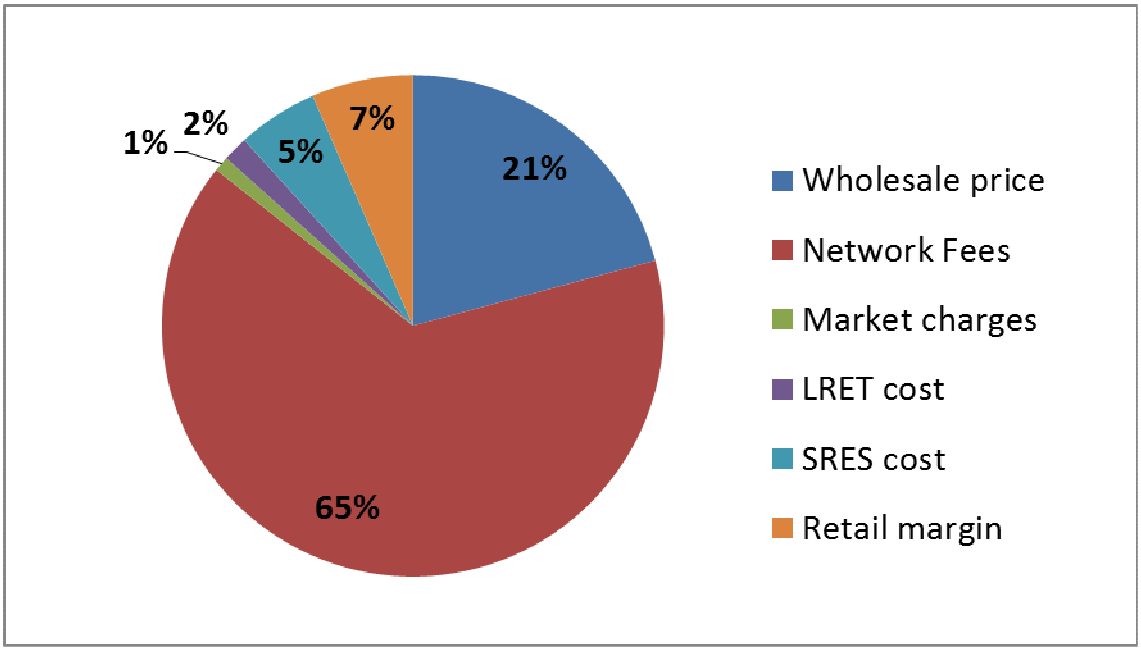
The June 2010 reforms that saw the separation of the LRET and the SRES provided greater certainty for investment in large-scale renewable

[10] "*An analysis of Australia's Large Scale Renewable Energy Target: restoring market confidence*" Tim Nelson, James Nelson, Jude Ariyaratnam and Simon Camroux, September 2012

technologies, the deployment of which was threatened in 2009-10 by the confluence of falling costs and additional subsidies that boosted demand for small scale technologies within the former unified market.

The Clean Energy Council has commissioned research from expert consultants SKM[11] which illustrates that the RET has a low cost to electricity consumers, particularly when compared to other segments of retail electricity prices. The graph below from that study explains that the LRET represents approximately 2% of the cost of retail electricity prices, while the SRES represents approximately 5%[12].

Components of NSW Retail Tariffs for 2012



20. Should there continue to be a separate scheme for small-scale technologies?

Vestas does not have a view as to whether or not the small-scale technologies should enjoyed continued support in order to encourage their further deployment.

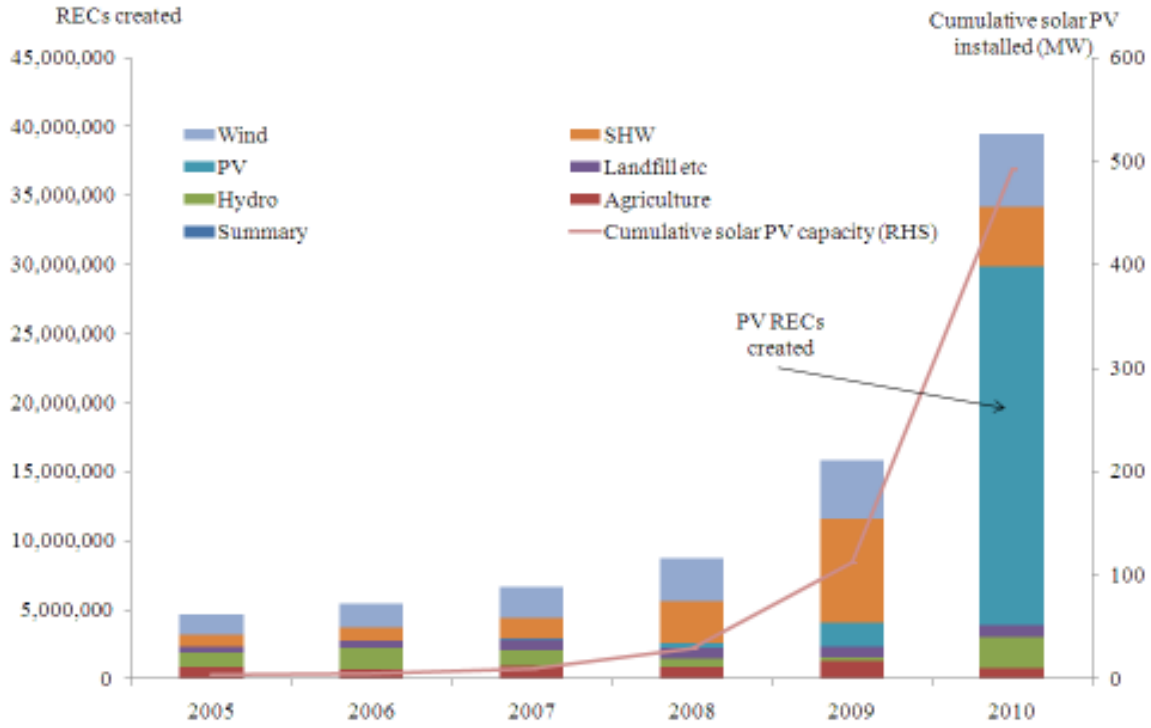
However, in the event that it is deemed appropriate for a support scheme such as the SRES to continue, such a scheme should definitely remain separate from the LRET.

The previous situation (resolved by the June 2010 amendments to the RET legislation) left investors in large-scale renewable energy projects in a position where it was impossible for them to obtain any useful kind of price discovery because of the sheer volume of REC creation from small-scale

[11] "*Benefit of the Renewable Energy Target to Australia's Energy Markets and Economy*", Sinclair Knight Merz, August 2012

[12] Diagram taken from SKM study mentioned above.

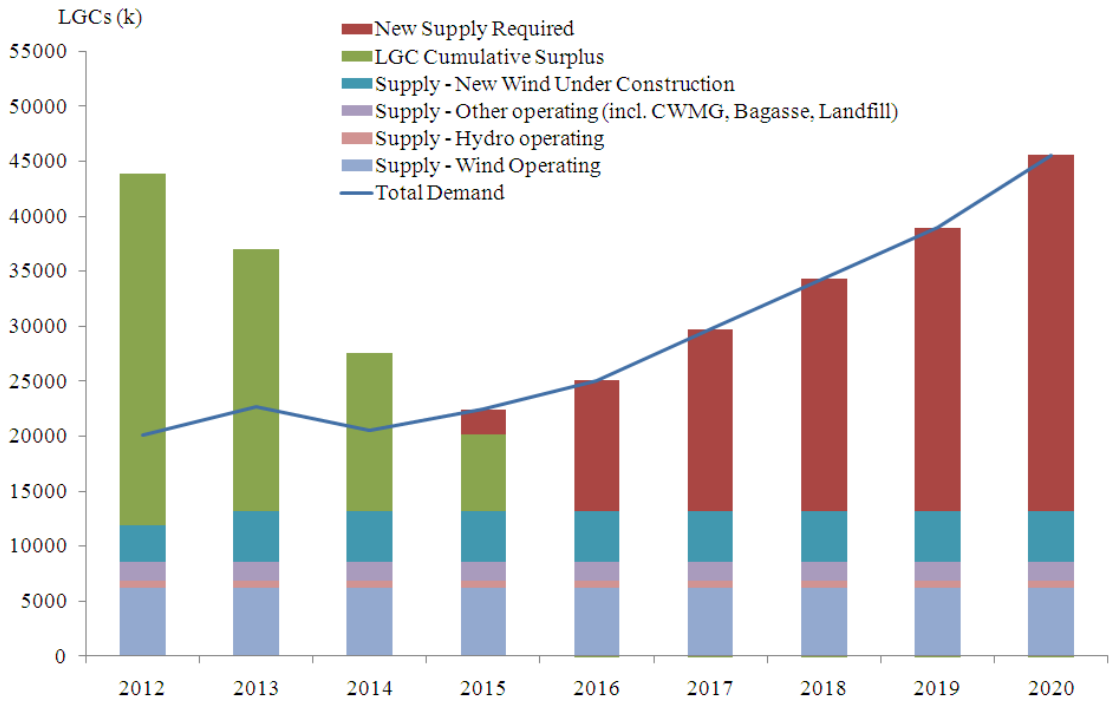
installations during 2009 and 2010. The glut of RECs created by small-scale installations can be seen in the diagram below[13].



As has been documented elsewhere, this combination of support for both small-scale and large-scale renewable energy technologies in a single scheme led to an enormous number of RECs being created to the point where a surplus was built up to a level that continues even now to slow the deployment of large-scale projects, as the following diagram illustrates[14].

[13] Diagram taken from "*An analysis of Australia's Large Scale Renewable Energy Target: restoring market confidence*" Tim Nelson, James Nelson, Jude Ariyaratnam and Simon Camroux, September 2012

[14] Ibid.

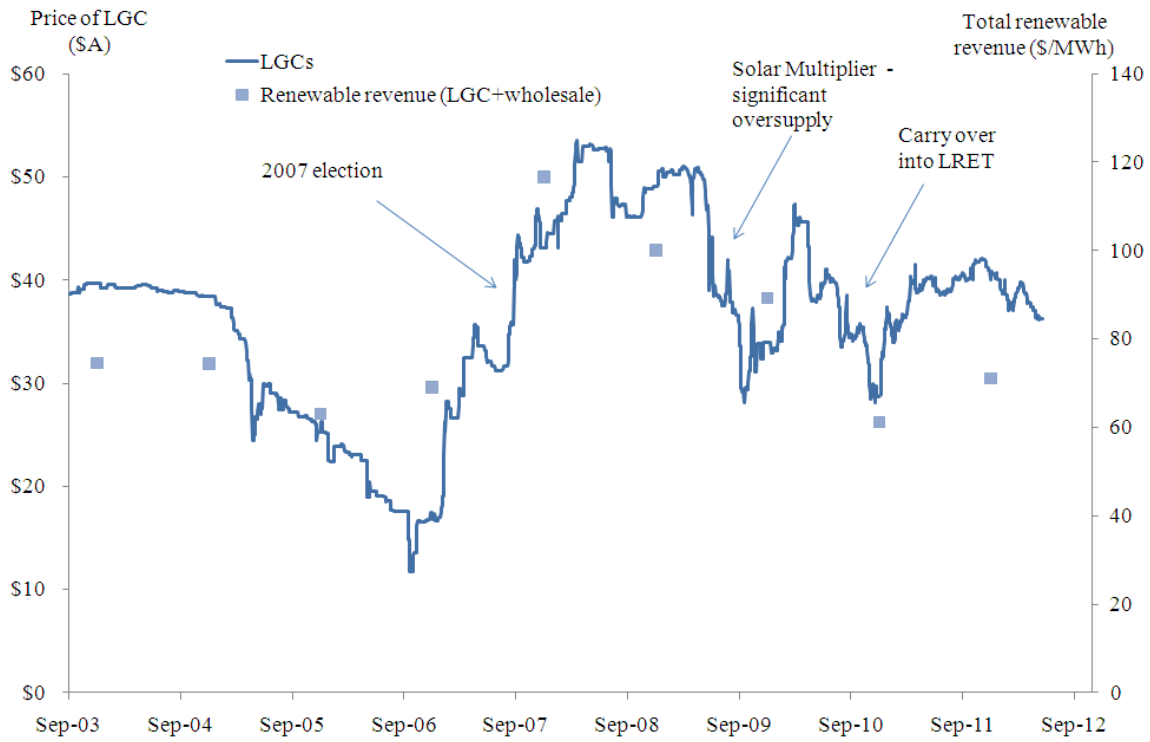


This policy mistake has thankfully been corrected as a result of the June 2010 reforms, and must not be repeated.

Vestas is highly concerned by anecdotal reports of CCA staff floating the idea that the LRET and the SRES could or should be re-aggregated into a single scheme. Such a significant change to the RET would disregard the clear intention of the Parliament of Australia (as expressed in the June 2010 reforms) and shows a worrying lack of understanding by CCA staff of the impact of such speculation upon the business case for proposed investments that rely upon the LRET in its current form.

The CCA has a task to carry out in accordance with the reference from Minister Combet. But the uncertainty arising from political risk and speculation about the RET has a real and significant impact on the business case for large-scale renewable energy projects. This manifests itself in the volatile movements in the REC (now LGC) spot price, as the following diagram demonstrates[15].

[15] Ibid.



21. Is the uncapped nature of the SRES appropriate?

No comment.

22. What do you see as being the costs and benefits of an uncapped scheme in terms of economic efficiency, environmental effectiveness and equity?

No comment.

23. Is the SRES driving investment in small scale renewable technologies? Is it driving investment in skills?

No comment.

24. What is the appropriate process for considering and admitting new technologies to the SRES?

No comment.

25. Should any additional small-scale technologies be eligible to generate small-scale technology certificates?

No comment.

26. Is it appropriate to include displacement technologies in the SRES?

No comment.

27. Should additional eligible technologies under the SRES be limited to generation technologies?

No comment.

28. Is deeming an appropriate way of providing certificates to SRES participants?

No comment.

29. Are the deeming calculations for different small-scale technology systems reasonable?

No comment.

30. What are the lessons learned from the use of multipliers in the RET? Is there a role for multipliers in the future?

The decision of the Australian Government to introduce the REC multiplier for small-scale solar PV installations was primarily motivated by a need to find budgetary savings and scrap the $8000 rebate that was previously paid for solar PV installations.

The use of the multiplier has been highly successful in increasing the uptake of solar PV by businesses and households.

However, the resulting spikes in the uptake of solar PV led to the creation of an enormous number of RECs in 2010 and 2011. As a result of the 2010 amendments to the RET legislation, these RECs became LGCs and have played a major role in suppressing the LGC price and deferring investment in utility scale renewable energy for many years. This is illustrated by the diagrams in our answer to question 20 above.

The REC multiplier has also imposed unsustainably increasing costs on electricity consumers over the past three years.

As a budgetary savings measure for the Australian Government it was a successful one but as an energy policy measure it was poorly conceived, and caused major delays for investors and increased retail electricity prices for consumers.

31. Is the Small-scale Technology Certificate Clearing House an effective and efficient mechanism to support the operation of the SRES?

No comment.

32. Should changes be made to the Clearing House arrangements? If so, what would be the costs and benefits of any suggested alternative approaches?

No comment.

33. Is $40 an appropriate cap for small-scale certificates given the recent fall in cost of some small-scale technologies, particularly solar PV?

No comment.

34. Are the SRES administration arrangements appropriate and working efficiently?

No comment.

Diversity of renewable energy access

35. 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?

One of the great strengths of the LRET design is the focus on deploying increasing amounts of renewable energy generation each year at the lowest possible cost. It follows that any change to the LRET to promote so-called "diversity of renewable energy access" will increase the costs of the LRET.

Given the political, community and media concern about rising retail electricity prices in recent years it makes little sense to foreshadow amendments to the LRET along such lines.

Indeed, one of the drivers of recent increases in retail electricity prices has been the decision of the Australian Government to introduce the REC multiplier for small-scale solar PV installations in an effort to make budgetary savings and scrap the $8000 rebate that was previously paid for solar PV installations. That change to the RET scheme transferred the cost of encouraging solar PV installations from the Australian Government to electricity consumers by increasing the overall cost of the RET.

Amending the LRET along similar lines to promote "diversity of renewable energy access" (which we note is not even listed as an objective of the RET legislation) would increase the cost of the RET to consumers by moving away from the technology-neutral LRET design that is currently in place.

It is an approach Vestas would strongly oppose.

The Australian Government already has other initiatives such as the Clean Energy Finance Corporation and the Australian Renewable Energy Agency and the various programs administered by such bodies that seek to increase the diversity of Australia's renewable energy generation installations.

If diversity is adopted by the Australian Government as an objective in itself, ARENA and the CEFC appear to be the most likely and appropriate bodies to finance early stage research and development and the commercialisation of novel and diverse renewables technologies.

36. What would be the costs and benefits of driving more diversity through changes to the RET design?

Vestas has not done any modelling to determine the costs and benefits of so-called "diversity" driven changes to the RET.

However, we note that the current design of the LRET deploys the most cost-efficient renewable energy generation technology at a large scale. In recent times that means wind energy has been highly successful but if another

renewable energy generation technology becomes available at a large scale and at a lower cost than wind energy then it will succeed under the current LRET design.

By definition, any changes to this current scheme design to favour higher-cost renewable technologies will result in higher costs of the RET scheme itself, and ultimately higher costs for retail electricity consumers.

Vestas opposes any changes to the RET (particularly the LRET) on the basis that they would be highly likely to defer or displace the lowest cost utility-scale renewable energy generation technology in favour of more expensive technologies, thus harming investor confidence and also placing a dead-weight loss upon the Australian economy.

Review frequency

37. What is the appropriate frequency for reviews of the RET?

A biennial review of the RET is a significant concern for investors, and detracts from the goal of a stable investment environment. Investments in renewable energy that face greater uncertainty will either not proceed, potentially leading to shortfall charges, or proceed with higher financing costs, ultimately recovered from electricity consumers. A fundamental re-consideration of the policy and legislation every two years is a recipe for uncertainty. Uncertainty has a cost and that cost will ultimately be paid for by electricity consumers.

Vestas shares the industry sentiment referred to by Minister Combet in his letter to the CCA Chair:

> *"I note that some renewable energy industry stakeholders have expressed the view that the statutory requirement for the Authority to review the RET scheme every two years is inappropriate and contributing to uncertainty for investors".*[16]

Vestas also agrees with the statement in the CCA Issues Paper that *"frequent reviews may also create uncertainty, negatively affecting the investment climate".*[17]

38. What should future reviews focus on?

No comment.

Further questions

Vestas staff would be pleased to meet with relevant CCA staff to discuss our submission and answer any other questions.

We would also invite CCA staff and/or board members to visit one or more of the many wind farms around Australia and meet with our suppliers and contractors to discuss the economic benefits of the RET with them.

Contact details are on the covering email for this submission.

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[16] CCA Renewable Energy Target Review Issues Paper, page 53

[17] Ibid, page 46