PRACTICAL, SOCIAL AND FINANCIAL CONSIDERATIONS FOR MEETING THE 2020 RENEWABLE ENERGY TARGET

CLEAN ENERGY COUNCIL

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OCTOBER 2014

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THE LEGISLATED RENEWABLE ENERGY TARGET IS ACHIEVABLE

Australia's Large-scale Renewable Energy Target (LRET) requires that 41,000 gigawatt-hours (GWh) of electricity is generated from renewable sources by 2020. Significant new generation infrastructure will be required between now and the end of the decade in order to meet the target.

In considering the challenges of building that infrastructure, this paper demonstrates that the current target can be achieved, with clear and strong policy certainty.

Summary

- Modelling undertaken by ACIL Allen by the RET Review panel showed that the 2020 target of 41,000 GWh can be achieved. This is supported by modelling by ROAM Consulting following detailed consultation with the renewable energy industry and its supply chain.
- The renewable energy industry has a long-established track record of delivering on targets, with higher levels of deployment, in shorter time frames and at lower cost than many analysts and decision makers have predicted.
- A strong and stable Renewable Energy Target (RET) with bipartisan support will cement the obligations for new renewable energy investment necessary to deliver the legislated targets.
- There is currently a surplus of Large-scale Generation Certificates (LGCs) that allows some flexibility and time to ramp up investment necessary to deliver the currently legislated target.
- There is currently a surplus of electricity generation capacity that is resulting in lower wholesale electricity prices (and lower power bills for consumers). However new renewable energy projects are commercially viable when this wholesale energy price is combined with LGC prices that are below the tax-effective penalty price of the LRET.
- The cost of renewable energy technology is expected to continue to fall, as forecast by the federal Bureau of Resource and Energy Economics.
- There is a significant pipeline of approved projects capable of delivering the 41,000GWh target in line with the legislated trajectory as soon as policy certainty is restored.

- While the three major electricity retailers (Origin, AGL and Energy Australia) may be resistant to enter into long-term contracts for new renewable energy projects, renewable energy developers and financiers are continuing to evolve deal structures and finance arrangements in order to meet the legislated RET obligations. There are a number of projects currently being completed that do not depend on the support of the three major electricity retailers at all.

- There is significant change and innovation occurring in the electricity retail sector that is providing new commercial channels to finance renewable energy projects that reduces dependence on the big energy companies. These changes are already starting to show benefits for customers with retailers supported by RET-eligible generation already delivering big discounts to retail customers.

1.1 Financial considerations

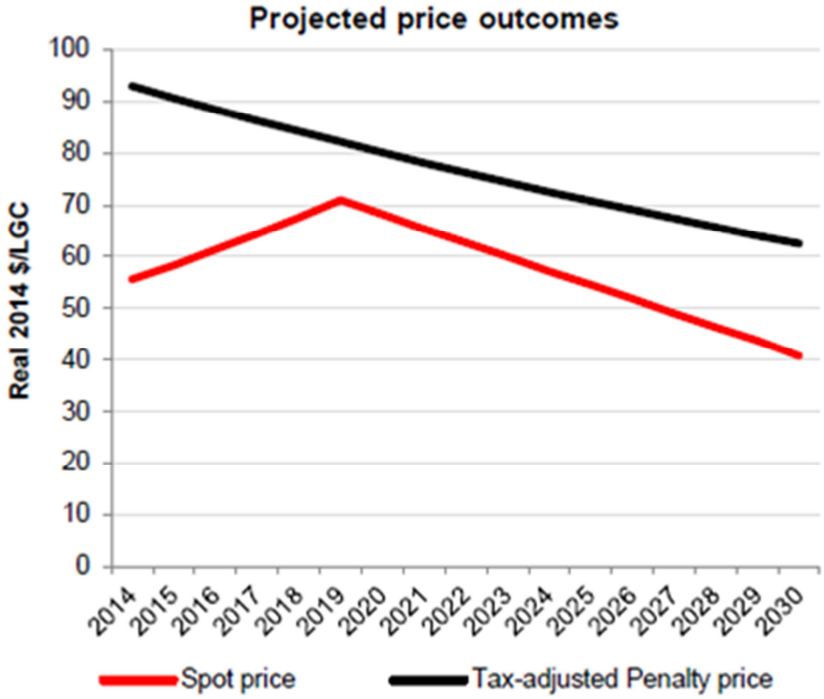
Australia's LRET requires that 41,000 GWh of electricity come from renewable sources by 2020. Currently the LRET is already delivering 16,100 GWh of new renewable energy generation, meaning that a further 24,900 GWh will be required over the next six years under current policy settings.

The question of the viability of meeting the LRET is discussed in two important pieces of analysis, which are referred to in this paper. These are: the final report of the expert review commissioned by the Federal Government to review the policy[1], released in August 2014, and a detailed analysis of the RET undertaken by ROAM Consulting[2] for the Clean Energy Council, which was released in May 2014.

There is currently a surplus of electricity generation capacity that is resulting in lower wholesale electricity prices (and lower power bills for consumers). Commercialising a renewable energy project requires that the combined expected revenue from the wholesale energy and LGCs cover the cost of constructing and operating the project over its life.

[1] Renewable Energy Target Scheme; Report of the Expert Panel, August 2014, https://retreview.dpmc.gov.au/ret-review-report-0

[2] Roam Consulting, RET Policy Analysis, May 2014 http://www.cleanenergycouncil.org.au/policy-advocacy/renewable-energy-target/ret-policy-analysis.html



Both the ROAM and ACIL Allen modelling found that the legislated target is achievable, as currently designed, without reaching the in-built penalty price, provided the current uncertainty surrounding the policy is resolved. This is shown in the graph below, taken from the modelling completed by ACIL Allen for the RET Review. It clearly shows that the LGC price will not rise to the level of the penalty price, under the current design of the scheme.[3]

This is particularly the case given the cost of renewable energy technology is expected to continue falling, as forecast by the federal Bureau of Resource and Energy Economics. A strong and stable RET with bipartisan support will unlock the new investment necessary to deliver the legislated targets.

The uncertainty created by the current review of the RET has delayed work on projects throughout 2014 and this uncertainty is yet to ease. According to the ROAM report:

> *"The outcome of the 2012 RET review resulted in no change to the LRET, and the industry was subsequently able to develop some new projects. However, renewed activity only lasted 12 months and slowed again as the 2014 review drew closer."*

The RET review report came to similar conclusions, with the current uncertainty affecting the price of LGCs, and in turn the financial viability of projects. The industry considers investment certainty to be the key driver of financial viability. Resolving the current RET review and locking in place a clear, bipartisan RET will overcome this issue.

[3] ACIL Allen, RET Review Modelling, Section 2.2.1 RET outcomes, page 15, August 2014. https://retreview.dpmc.gov.au/sites/default/files/files/ACIL_Report.pdf

It has been suggested that one barrier to meeting the target will be limited availability of Power Purchase Agreements (PPAs) with the main electricity retailers. It is clear that to date the three major electricity retailers have signed the bulk of the PPAs supporting renewable energy projects, but this will not necessarily be the case in the future.

While the three major electricity retailers may be reluctant to enter into long-term contracts for new renewable energy projects, renewable energy developers and financiers are continuing to evolve deal structures and finance arrangements in order to meet legislated RET obligations. There are a number of projects currently being completed that do not depend on the support of the three major electricity retailers at all.

There is significant change and innovation occurring in the electricity retail sector that is providing new commercial channels to finance renewable energy projects that reduces the dependence on the three major electricity retailers. These changes are already starting to show benefits for customers, with retailers supported by RET-eligible generation already delivering big discounts to customers.

As the renewable energy industry has demonstrated in the past, a PPA is not essential to get a renewable energy project financed and constructed. To date, a portion of wind projects were developed and are operating without the backing of PPAs, on the back of a clear, bipartisan renewable energy target that had given investors the confidence to finance projects.

With a clear, bipartisan RET in place the renewable energy industry is confident that the financing models will exist to build projects with or without the backing of PPAs, and that an unwillingness to sign PPAs is not a complete barrier to developing projects.

1.2 Installation rates and the project pipeline

The final report of the RET review expert panel (the RET review report) addresses the question of meeting the LRET[4], as does the report completed for the Clean Energy Council by ROAM Consulting (the ROAM report)[5].

Due to the stalled investment in large-scale renewable energy as a result of the recent reviews of the policy, a significant pipeline of approved projects exists. This pipeline is capable of meeting the 41,000 GWh LRET in line with the legislated trajectory as soon as policy certainty is restored.

The RET review report estimated that meeting the LRET will require the installation of a further 9000 megawatts (MW) of renewable energy capacity. The ROAM report found that meeting the target will require an annual build rate of 1500-1800 MW of new renewable energy between the resolution of this review and 2020.

[4] Renewable Energy Target Scheme; Report of the Expert Panel, Section 5.2 Can the LRET be met?, page 32, August 2014, https://retreview.dpmc.gov.au/ret-review-report-0

[5] Roam Consulting, RET Policy Analysis, Section 3.1 *Achieving the existing LRET GWh target*, page 8, May 2014 http://www.cleanenergycouncil.org.au/policy-advocacy/renewable-energy-target/ret-policy-analysis.

There is currently a surplus of LGCs that allows some flexibility and time to ramp up investment necessary to deliver the currently legislated target.

The annual rate of renewable energy installation has been closely aligned with major changes in policy settings to date. Frequent legislative reviews of the RET have also slowed investment as project partners wait on the outcome of reviews before committing capital or signing off-take agreements.

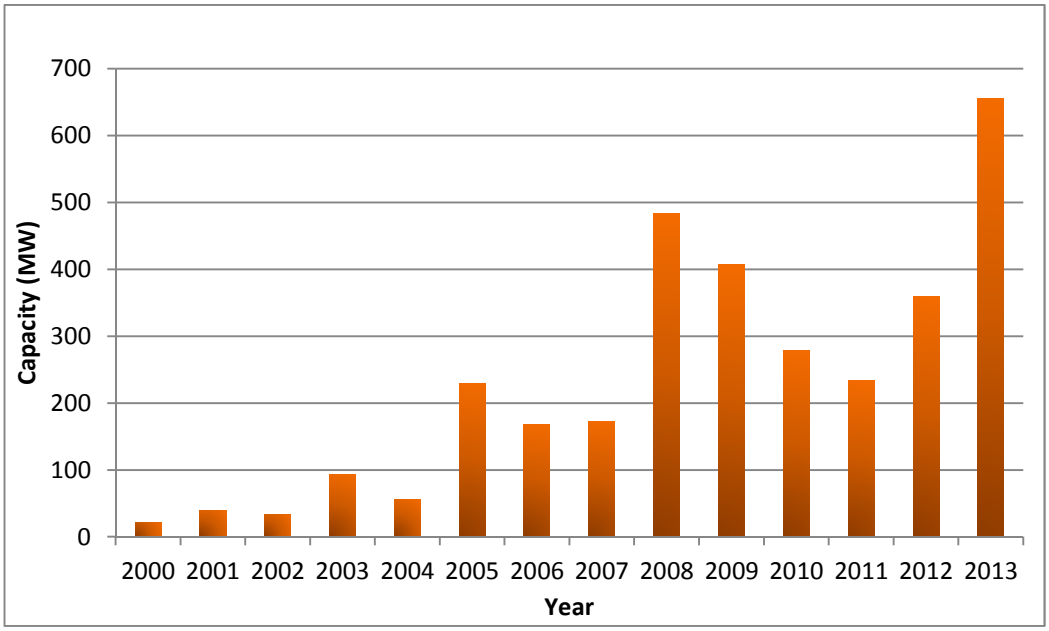
Changes to planning laws, such as the more restrictive planning framework in Victoria, have also contributed to a lower installation rate in some areas of the country.

As a result of those and other factors, the highest annual wind installation to date has been 655 MW in 2013, made up of the 420 MW Macarthur project in Western Victoria, the 168 MW Musselroe project in Tasmania, and four smaller wind farms in Western Australia. This rate could be substantially increased by a rapid resolution to the current review of the RET and the removal of the requirement for a review of the policy to be completed every two years.

The ROAM report found that the wind industry alone will install around 650 MW in 2014 and another 900 MW in 2015 through projects that are under construction and in development. But future project development is contingent on a positive outcome following the RET review process.

The current surplus of LGCs allows considerable flexibility and time to ramp up the investment necessary to deliver the currently legislated target. Further, the recent construction of the 20 MW Royalla Solar Farm in the ACT showed that a large-scale solar project – a relatively new technology in the Australian context – could be built in a short period of time. The project went from inception to being completely operational in 24 months. As this sector grows and develops this delivery time will reduce further.

FIGURE 1.1 **ANNUAL INSTALLED WIND CAPACITY** *Source: Clean Energy Council*



The RET review report found a project pipeline of 16,800 MW of wind farm projects and 1700 MW of large-scale solar projects. Critically, the report found that approximately 6000 MW of this already has planning approval.

The RET review report concluded that it is technically possible to reach the target, subject to the resolution of commercial contracts and the availability of finance.

1.3 Practical considerations

The ROAM report states that there are no practical constraints to achieving the target such as importing components or acquiring steel. The ROAM report discussed the achievability of the LRET in detail with the industry and its supply chain, who unanimously agreed that the industry had the capacity to meet the target.

It also found that labour availability and construction equipment will not affect installation rates. In the event that more cranes are required for building wind farms, they can be quickly brought in from overseas. This is particularly the case now that the resources boom has slowed.

This conclusion was also reflected in the RET review report, which quoted secretariat interviews with stakeholders. For example major Australian renewable energy developers Infigen Energy and Acciona Energy both told the RET review secretariat that there is an adequate project pipeline to meet the RET target. Infigen Energy pointed out that this is dependent on the restoration of regulatory certainty for the sector.

1.4 Social considerations

The pipeline of large-scale renewable energy projects that are either approved or under construction is capable of meeting the LRET. However, the ROAM report found that financial and social constraints are more likely to create bottlenecks for meeting the LRET than practical constraints. Of particular concern are regulatory uncertainty and planning approval timelines. However, as mentioned in section 1.2, a significant pipeline of approved wind power projects already exists.

Planning approval processes for major projects can take years and are particularly sensitive to the renewable energy industry's social licence to operate. The wind industry is aware of this and is working to ensure that the maximum possible benefits are delivered to the community from new projects.

The Clean Energy Council has worked closely with its wind industry members over the past two years to fund and develop a set of best practice community engagement guidelines and raise the bar for strong engagement across the industry. These guidelines, launched in mid-2013, describe several methods for effectively interacting with members of the community as well as some models for sharing the financial benefits of the project through mechanisms such as the establishment of community funds.

The wind industry in Australia has in recent years adopted some innovative new models for ensuring the whole community can benefit from a project. Approaches currently in use in Australian communities include local ownership, direct benefits such as funding for community projects, prioritised local employment and business contracts, and community enhancement funds.

With strong community engagement, there is no reason why more projects will not successfully seek and gain approval in the next few years. Some states like South Australia have supportive planning regimes in order to maximise the opportunity for their local economy to benefit from the investment brought by wind farm projects.

1.5 Conclusion

The renewable energy industry has an established track record of delivering on targets. The industry has consistently out-performed expectations from analysts and decision-makers when it comes to levels of deployment, time frames and cost.

Analysis by both the industry and that commissioned for the review of the RET found no practical constraints to building enough new renewable energy generation to meet the LRET. From here, it is vital to restore regulatory certainty to the sector in order to allow the industry to build the required projects.

The Federal Government should leave the RET as it is and reduce the frequency of future legislated reviews. The RET will generate approximately 18,400 new jobs by 2020 if retained in its current form. This is made up of 9700 jobs in large-scale technologies such as wind power and bioenergy and 8700 in household systems such as solar power and solar hot water.

In addition to the $20 billion of investment already generated, the RET will drive a further $14.5 billion of investment in large-scale renewable energy out to 2020, as well as many billions more in household renewable energy such as solar power.