

# Picking winners and policy uncertainty: Stakeholder perceptions of Australia's Renewable Energy Target

Genevieve Simpson\*, Julian Clifton

School of Earth and Environment, University of Western Australia, 35 Stirling Highway, Crawley, Western Australia 6009, Australia



## ARTICLE INFO

### Article history:

Received 14 October 2013

Accepted 14 November 2013

Available online 8 December 2013

### Keywords:

Renewable energy target

Australia

Emissions reduction policy

Energy policy

Policy process

## ABSTRACT

Australia's Renewable Energy Target (RET) mandates investment in renewable electricity generation through a renewable energy certificate market. A legislated national consultative review of the RET was carried out in 2012, resulting in 8660 submissions. Respondents were invited to comment on the value of the legislated target, including whether the legislated target should be a fixed GWh target or a fixed policy-based percentage-of-demand target, and the impact of review processes on the renewable energy industry. This paper presents the first analysis of submissions and evaluates their implications for the future of this policy. There was a consistent alignment of opinion amongst respondents, with industry and fossil-fuel generation/retailer groups opposing the RET objectives, whilst these were supported by NGOs and the renewable sector. However, most respondents favoured maintaining the overall goal of providing 20% renewable electricity generation by 2020. Concerns were raised by most groups of respondents regarding policy continuity and excessive reviewing procedures. In its response to the review, the Climate Change Authority made a total of 34 recommendations, 18 maintaining the status quo. Only six recommendations were endorsed by the Australian Government that would result in changes to the scheme. It is concluded that such review processes can be significantly harmful to maintaining stability and certainty in an industry requiring long-term commitment for investments, and that the Australian Government continues to favour the status quo in responding to consultative review processes relating to renewable energy policies.

© 2013 Elsevier Ltd. All rights reserved.

## 1. Introduction – the renewable energy target legislation and review processes in Australia

The role of renewable energy in replacing incumbent fossil-fuel generating electricity systems is assuming greater significance as governments are under pressure to reduce greenhouse gas emissions. The enduring question within the renewable energy policy framework is how much support (economically and otherwise) the renewable energy industry requires to thrive.

Australia has had three manifestations of national legislation aimed at promoting the renewable energy industry and, in turn, reducing greenhouse gas emissions. The measurable outcome of these policies is to see an increase in the proportion of 'clean' generation technologies in the electricity generation mix [1]. This is done by requiring electricity retailers to source a proportion of the electricity for their customers from certified 'clean' generators through the purchase of renewable energy certificates, encompassing both

large-scale renewable sources such as wind farms and small-scale sources such as household renewable technologies.

Periodic reviews of the schemes were included as a requirement of the legislation. The first of these reviews was the Tambling Review in 2003, which invited submissions on the functioning of the initial legislation [1]. Subsequent to the Tambling Review were frequent additional review processes that considered the legislative framework, specific aspects of the legislation and the interaction between the legislation and other policy initiatives [2]. A review of the most recent incarnation of the legislation, to be undertaken by the independent Climate Change Authority, was initiated in August 2012 [1].

These review processes and the broader academic literature regarding renewable energy certificates highlight various issues with the development of such policies. These include the lack of appropriate consultation processes when developing legislation [3]; the lack of certainty and consistency in renewable energy policies, in particular for small-scale renewable energy technologies [4]; and the on-going commitment to existing policies favouring the status quo and fossil-fuel generating industries in particular [5].

\* Corresponding author. Tel.: +61 8 6488 3661.

E-mail addresses: [Genevieve.Simpson@uwa.edu.au](mailto:Genevieve.Simpson@uwa.edu.au), [glmsimpson@gmail.com](mailto:glmsimpson@gmail.com) (G. Simpson).

Kent and Mercer [6] proposed that the submissions made available as part of the 2003 Tambling Review provided potentially the most comprehensive overview of the status of Australia's renewable energy sector. Ten years have elapsed since this review, with changes in Government, relevant legislation and industry over this time. An assessment of the submissions to the most recent review of the legislation, the 2012 Climate Change Authority's review of the RET, therefore provides insight into the current state of the renewable energy sector and perceptions of renewable legislation and associated policy development processes.

## 2. Material and methods

The Climate Change Authority undertook a consultative review process, including the development of an issues paper for general comment, and a discussion paper that provided a draft of final recommendations for further comment. There were 8660 submissions received in response to the Issues Paper (8500 campaign submissions and 160 stakeholder submissions), with 54 responses to the Discussion Paper [1]. Four roundtables and 60 one-on-one interviews were undertaken over the course of the review process.

This assessment of the Australian Government's Renewable Energy (Electricity) Act 2000 legislation and the associated Climate Change Authority Review of the RET follows a similar approach to Kent and Mercer's [6] evaluation of the Tambling Review process. Submissions to the Climate Change Authority's Issues Paper were critically assessed against the questions posed within the Review Issues Paper. All submissions were assessed according to criteria as outlined in Kent and Mercer [6], namely the type of stakeholder, their overall perspective of the legislation (whether they support or reject its value) and any particular issues of note to the stakeholder. Particular issues of interest were those surrounding the effects of uncertainty in the legislation on industry, including in relation to the GWh target, the effects of continual review processes, and perceptions of embedded policies favouring other technology types, including a certificate multiplier for small-scale photovoltaic systems. Information on the number of responses to particular themes was recorded by stakeholder type (peak industry group, corporation, academic, individual, environmental NGO), with supporting statements provided alongside each respondent's details.

The Final Review Report was released on 19 December 2012 [7]. The Australian Government's formal response to recommendations outlined in the Final Review Report was released on 23 March 2013 [8]. The Climate Change Authority's recommendations and the Australian Government's response to the Climate Change Authority's Review Report were examined. Analysis of the extent to which the Australian Government is prepared to undertake modifications to the legislation in light of the Climate Change Authority's findings assisted in determining whether the review process is seen as beneficial to Australia's renewable energy industry or whether it is an unnecessary disturbance.

Collection of data for the research was via the Climate Change Authority website [7], which publishes all calls for submission, submissions from stakeholders and the Review Report itself. The Australian Government published its response to the Climate Change Authority's Review Report and recommendations through the Department of Climate Change and Energy Efficiency website [8].

## 3. Theory – Australia's RET – targets, legislation and reviews

The first of Australia's renewable energy schemes came into force in April 2001 under the Renewable Energy (Electricity) Act 2000 [6]. The key measure of the Act was the initiation of the Mandatory Renewable Energy Target (MRET), which was to see a 2%

per annum increase to renewable energy generation by 2010, from a 1996/1997 10.5% baseline. Energy demand forecasts at the time of setting the target were used to equate the additional 2% renewable generation to a GWh target, namely 9500 GWh, which was the legislated target included in the Act.

Periodic reviews of the scheme were included as a requirement in the legislation. The Tambling Review in 2003 invited submissions on the functioning of the MRET [9]. The review process determined that an increase in electricity demand between the scheme's initiation and the time of review had resulted in the 9500 GWh target equating to less than a 2% increase in renewable generation. The Review Panel's recommendations included maintaining the 9500 GWh target to 2010 and then increasing the target to 2020 to promote industry investment. The Government supported the maintenance of the 9500 GWh target but rejected the proposal to expand the scheme. The Review Panel also considered amending the legislation to state a fixed percentage target with a floating GWh value, as opposed to the fixed GWh target. The Review Panel recommended maintaining a fixed GWh target to ensure certainty for investors.

In August 2009, legislation was passed to implement the expanded national RET, which brought the former MRET and existing and proposed state and territory schemes into one national scheme [10]. It expanded the previous MRET to a forecast 20% contribution to the electricity mix by 2020, set in the legislation as 45,000 GWh. The RET also included specific support for small-scale, rooftop solar photovoltaic systems, through the 'Solar Credits Multiplier' [1].

In June 2010, further legislation was passed to separate the expanded national RET into two parts, the Large-scale Renewable Energy Target (LRET), covering large-scale projects such as wind farms, commercial solar and geothermal, and the Small-scale Renewable Energy Scheme (SRES), covering domestic photovoltaic, wind turbine and efficient water-heating technologies [1]. The legislation separated the 45,000 GWh target into 41,000 GWh by 2020 for the LRET and a minimum 4000 GWh by 2020 for the SRES. The changes were designed to provide greater certainty for large-scale renewable energy projects, households and installers of small-scale renewable energy systems.

To date, the MRET and RET have resulted in renewable energy capacity almost doubling from 10,650 MW in 2001 to 19,700 MW in 2012 [1]. In spite of this, due to an increase in demand for electricity within Australia, renewable electricity generation as a proportion of total electricity generation per year has not changed significantly since 2000/01, having grown from approximately 8% to 10%. Wind and solar photovoltaic (PV) technology make up the majority of new renewable generation as a result of the MRET and RET [11]. Wind generation has grown under the RET from 200 GWh in 2000/01 to 5800 GWh in 2010/11. Solar photovoltaic generation has increased over the same time period from 50 GWh to 850 GWh (Fig. 1).

Under the 2011 updated legislation enacting the RET, the Climate Change Authority was tasked with completing a review of the scheme before the end of 31 December 2012 [12]. While the Climate Change Authority did not have a stipulated Terms of Reference for undertaking the review, any recommendation put forward by the Authority may not be inconsistent with the objectives of the Act, which were to a) encourage the additional generation of electricity from renewable sources; b) reduce emissions of greenhouse gases in the electricity sector; and c) ensure renewable energy sources are ecologically sustainable [13].

## 4. Results and discussion

All of the 160 stakeholder submissions were read and analysed according to areas of note within the Issues Paper. The 8500

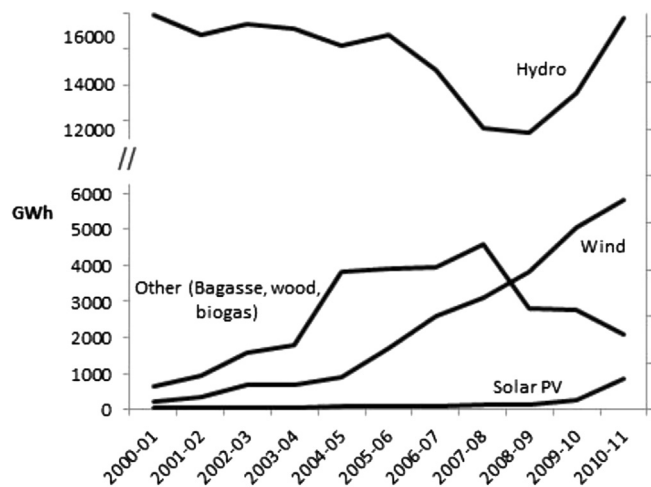


Fig. 1. Renewable energy generation in Australia, by year, from the initiation of the Mandatory Renewable Energy Target [11].

campaign submissions were derived from two key sources: GetUp, a grassroots community advocacy group (7806 submissions); and Hepburn Wind, a co-operative implementing the first community-initiated wind farm in Australia (694 submissions). With each of these two groups of campaign submissions treated as a single stakeholder submission, the total number of submissions assessed was 162 (Table 1).

The following discussion focuses on issues cited most frequently by industry and the public with regard to the RET and is applicable to other international renewable certificate trading mechanisms.

#### 4.1. Real, revised and projected – changes to the RET Target value

A major focus of the RET review was the consideration of whether the Target should be increased, decreased or maintained at the current legislated level. The decision to reassess the target was largely in response to reductions in energy demand forecasts resulting in the 45,000 GWh target making up approximately 26% of expected electricity demand by 2020/21 [1]. Reasons cited by respondents for the reduction in demand included increased small-scale renewable system installation, installation of energy efficient appliances, milder summers and winters and changes to the industrial nature of Australia (closing of manufacturing and processing plants).

Approximately 17% of stakeholders responding to this line of questioning ( $N = 132$ ) requested an increase in the target to 2020. Respondents recommending an increase to the target were primarily non-government associations and individuals (17 responses), and renewable-focus corporations and industry groups (5 responses). The majority of these responses argued for an increase

in the target to reduce greenhouse gas emissions within Australia, with many citing the Copenhagen Accord's goal of a 5% reduction in emissions relative to 2000 by 2020 as a primary driver for the need to reduce emissions. A handful of respondents also focused on the need to invest in renewable energy generation to diversify Australia's electricity generation system, avoiding the impacts of increasing fossil fuel costs associated with 'peak oil' and exposure to international gas markets.

Approximately 14% of respondents to this portion of the Issues Paper ( $N = 132$ ) argued for a reduction in the value of the 2020 target to match current demand forecasts. All but one of these respondents were from corporations or industry groups with a mixed-energy (fossil fuel and renewable) or fossil fuel focus. The majority of respondents noted increasing electricity costs associated with the RET as damaging for business and that the Australian Government should therefore endorse its initial commitment to '20% renewable energy by 2020'. Additionally, most stakeholders stated that the 2012 implementation of a carbon pricing mechanism in Australia meant there was no need for the RET. Respondents stated that the RET should only be maintained to 2020 in order to ensure investor certainty.

While some renewable-focussed stakeholders supported an increase to the 2020 target, 89% of them requested that the current 2020 target be maintained ( $N = 45$ ). This is a counter-intuitive response given it is renewable-focussed industry that is most likely to benefit from an increase in the target. A total of 63% of all respondents requested that the target be maintained ( $N = 132$ ), with responses spread across all stakeholder groups except fossil-fuel based corporations. The reasons for maintaining the target were varied, with many responses refuting reasons put forward to reduce the target to updated demand projections. It was noted that demand forecasting practices are inherently unreliable and that any number of changes in the future could alter the demand profile. There was considerable speculation that making significant changes to the RET as a result of the introduction of the carbon pricing mechanism may be unwise. It was suggested that Australia's carbon pricing mechanism may not be able to facilitate investment in renewable energy as a result of its currently low value, the exposure of the carbon price to international markets, and most importantly that the security of the carbon pricing mechanism is not assured. The Australian Government opposition party has vowed to abolish the carbon pricing legislation if it gains power following the September 2013 General Election [14]. Importantly, respondents noted that the Australian Government's explicit policy commitment was to meet 'at least' 20% of electricity demands in 2020 through renewable generation, and that this did not provide for a maximum renewable commitment. Finally, 38% of respondents to this line of questioning ( $N = 132$ ) stated that the RET should be maintained at the current target level in order to maintain investor confidence.

Interestingly, only 6% of submissions responding to this line of questioning suggested unequivocally that the RET should be

Table 1

Breakdown of submissions for the Climate Change Authority RET Review Issues Paper, by stakeholder type and attitude towards the RET.

	<i>N</i> (162)	Support the RET	Against the RET	No comment
Industry Groups and Corporations – Renewable energy focus – Small-scale and large-scale renewables, renewable-based engineering firms, combined generation/retailers	47	47	0	0
Industry Groups and Corporations – Mixed focus – supply renewable and non-renewable, retailers, network operators	23	16	3	4
Industry Groups and Corporations – High energy consumption, fossil fuel based inc waste coal mine gas	21	1	11	9
NGO/Association – environmental/climate interests	16	16	0	0
Individual – member of public, energy consultant, academic, campaign submissions	42	36	0	6
Other – Government, independent body, think tank, independently legislated office, unspecified	13	6	4	3

abolished. All but one of these submissions stated that the main reason for abolishing the RET was that it was no longer required as a carbon pricing mechanism had been established, and that the RET did not provide least-cost abatement. This is in spite of the fact that, of those respondents stating whether they supported or opposed the RET, 13% were against its inception. The difference between the number of stakeholders opposing the RET and the number recommending its abolition stems from the realisation that the RET has become a component of the Australian energy market, and that considerable investment by business has been made with regard to the RET. Both sides of the RET debate, those supporting and investing in renewables and those reliant on fossil-fuel generation, increasingly understand the importance of maintaining investor confidence in Australia by ensuring stability in policy. Increase in sovereign risk associated with changes to the RET, even if incremental, were deemed to extend beyond the renewable energy sector to other areas of the Australian industrial economy.

Kent and Mercer [6] noted that the Tambling Review Panel recommended maintaining the legislated target to ensure industry certainty. Additionally, the Australian Government agreed to a GWh target in Parliament on three separate occasions in 2000 [15], 2008 [16] and 2010 [17]. The reasons behind this conclusion have not changed, and therefore there is reason to question why the target was reassessed given it was not specifically required within the Climate Change Authority's remit. The removal of subsection 162(h) from the Renewable Energy (Electricity) Act 2000 [18], that the Review must include consideration of 'the level of the overall target and interim targets', was included within the Renewable Energy (Electricity) Amendment Act 2009 [19]. Though the explanatory memorandum makes no specific mention of why this requirement was repealed [20], its removal does indicate that consideration of the target's value was deemed unnecessary.

Leading up to the initiation of the review process there was considerable scrutiny of the GWh value of the target within the Australian media. Media interest was driven in large part by fossil-fuel based generation corporations and high electricity consumers noting financial implications associated with the RET [21,22]. Renewable interest groups were then vocally opposed to the reduction of the target in response to industry demands, citing this as self-interested behaviour [23,24]. Kent and Mercer's [6] concluding remarks note that respondents will be inherently self-interested in their contributions to consultative policy development processes. The case of stakeholder responses to the target review is clearly an example of this assertion in practice, with the power of stakeholders and the media apparently influencing review panel decisions to the potential detriment of the renewable energy industry.

#### 4.2. *To review or not to review? – frequency of review processes*

One of the most repetitive themes within submissions to the Climate Change Authority Review process was the potentially damaging impact of the Review process itself. The Review process was a legislative requirement of the RET scheme, however, the length of time between implementation of the most recent (2010) changes to the scheme and the initiation of the Review process was seen as unnecessarily short. 60% of respondents to the section of the Issues Paper requesting consideration of the frequency of reviews ( $N = 70$ ), from across the full spectrum of stakeholders, noted that the main concern in relation to future review processes was the need to maintain policy certainty and ensure minimal disruption to industry. 77% of stakeholders stated that the legislation should be amended so that there would be more than two years between each review process ( $N = 70$ ). An additional 9% of respondents indicated that it was not appropriate to change

legislation to increase time between reviews, as this would create additional investment insecurity, but that the scope of future reviews should be limited considerably and should be made explicit well ahead of time. In particular, many respondents noted that there should be only a long-run fixed review timetable, limited to determining whether future targets were large enough to support on-going renewable energy investment, with smaller reviews undertaken only when a certain threshold had been reached, for instance when the shortfall penalty charge (which acts as a price ceiling in the certificate market) was being paid instead of purchasing large-scale renewable certificates.

The focus of submissions on the length of time between review processes was unsurprising considering the negative consequences of concurrent and frequent review processes was noted within the Tambling Review. The Parer Review, which was undertaken concurrently with the Tambling Review, examined the most cost-effective means of reducing greenhouse gas emissions and found that the MRET was inefficient and that an emissions trading scheme would result in greater environmental benefits [6]. These review findings, and the fact that both review processes were undertaken concurrently, were found to create a level of uncertainty within the electricity generation industry. This situation was later echoed with the finalisation of the RET legislation reportedly overshadowed by the release of the White Paper on the Carbon Pollution Reduction Scheme (the Australian Government's emissions trading scheme) and associated claims by industry that such a scheme would increase electricity costs [10]. The on-going lack of clarity in the relationship between review processes, potential subsequent changes to RET legislation, and the interaction between the RET and an emissions trading scheme creates long-term uncertainty for industry.

In addition to the recurring theme of uncertainty surrounding on-going review processes, stakeholders also noted 'review fatigue', with ten review processes specifically related to the RET in the last five years [2], naught resulting in substantial changes to the policy framework. The Australian Government's decision to provide opportunities for stakeholder feedback at multiple steps in the development of legislation is evidence of its preference for consultative policy-development processes, a system which is increasingly being questioned. Crase et al. [25] found that such community consultation processes may be inefficient as successive consultation processes may contain unique questions and responses to the extent that each consultation process must be started anew, without an opportunity for policy-makers to learn from the outcomes of previous consultation processes. Contrary to this, the RET Issues Paper responses indicate that the opposite is true – stakeholders are growing increasingly frustrated with covering similar material, with the same outcomes, in on-going review processes. That the previous review processes have been ineffectual in creating marked change to the policy environment, for the betterment of industry or with additional environmental benefits, indicates that these review processes are ultimately more likely to result in delays in investment and industry uncertainty. As one respondent to the Issues Paper put it, 'constant review is not reform' [26].

#### 4.3. *'Picking winners' in renewable energy policy – the solar credits multiplier and other schemes*

The Solar Credits Multiplier was introduced to the RET in 2009 by the Australian Government as a replacement for the over-subscribed \$8000 Solar Homes and Communities Grant [1]. In creating the Solar Credits Multiplier the Australian Government was able to shift the financial burden of the Grant from their own budget to electricity consumers. The Australian Government initially designed the scheme with a five times multiplier, reducing



each financial year to one [1]. Additionally, each small-scale photovoltaic system received generation certificates based on a forecast 15 year 'deeming period' [1]. The combination of the solar credits multiplier and the deeming period led to an initial upfront rebate equivalent to 75 years of generation. The 75 years of generation for a system at the initial certificate price was equivalent to approximately \$7500 [1], close to the value of the Grant the Solar Credits Multiplier was replacing.

The Solar Credits Multiplier was credited with increasing uptake of small-scale solar systems, with 18% of respondents to this line of questioning noting that the scheme resulted in substantial investment ( $N = 68$ ). However, a larger proportion of submissions criticised the use of the policy to stimulate investment. A confluence of factors was cited as causing the Solar Credits Multiplier scheme to become oversubscribed, including the initiation of generous state-based feed-in tariff schemes and increased demand creating scales of economies that reduced the price of systems. In response to the increased generation of certificates associated with the scheme the Australian Government decreased the multiplier ahead of schedule on two occasions [1], resulting in uncertainty for the small-scale solar industry. With regards to the Issues Paper submissions, three key criticisms of the Solar Credits Multiplier were proposed.

#### 4.3.1. 'Phantom credits'

The Solar Credits Multiplier was unfavourably received by 18 respondents who noted that the multiplication of 'real', deemed certificates created 'phantom credits': certificates that did not equate to actual abatement and yet still contributed to the achievement of the target. There were even calls by some respondents that the RET target value should be increased to take into account the generation of phantom credits. The exact number of phantom credits allocated under the RET between the initiation of the scheme in 2009 and the final generation of credits at the end of 2012 has not been made public. However, data available through the Clean Energy Regulator indicates that 'phantom credits' could have contributed approximately 66% of the certificates required to meet the RET target value between 2009 and 2012 (Table 2).

#### 4.3.2. Boom–bust cycles

The reduction of multipliers over time was found to create large surges in sales prior to the reduction of a multiplier, with householders attempting to take advantage of the higher rebates, followed by bust periods with reduced householder investment, resulting in boom–bust cycles noted by nine respondents. Data available from the Clean Energy Regulator [27] reflect the reality of boom–bust cycles, with peaks in small-scale installation rates coincident with the end of multiplier periods (Fig. 2). The boom–bust cycles were felt doubly by installers – not only were market sales of small-scale renewable systems experiencing fluctuations in demand but there were coincident fluctuations in the value of generation certificates sold within the RET market. The drastic

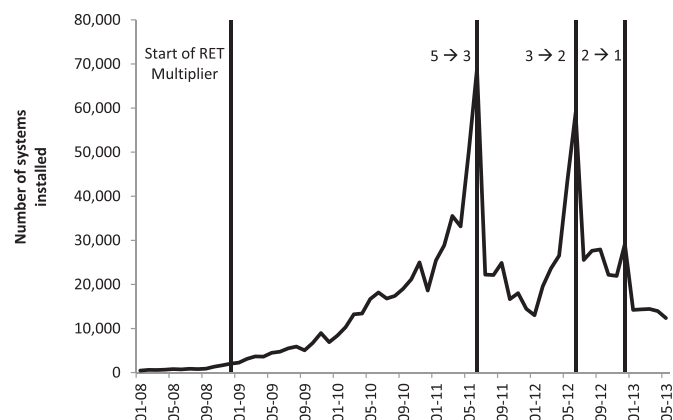


Fig. 2. Number of small-scale solar systems installed in Australia and reductions in the Solar Credits Multiplier. Reductions in the number of installations subsequent to reductions in the multiplier are indicative of 'boom and bust' cycles. Data collected from the Clean Energy Regulator [27].

reduction in demand for certificates, and reduction in their value, led to several members of the small-scale solar industry entering receivership [30]. One submission also credited reduced installation quality and education of customers, including appropriate system choice and system orientation, with installers trying to rush installations through within higher multiplier time periods [31].

#### 4.3.3. REC overhang

The introduction of phantom credits, combined with the over-subscription to the scheme, resulted in an excessive number of certificates being generated. There were two closely associated outcomes: the larger than expected number of certificates generated through the market resulted in retailers purchasing enough certificates to cover their RET liability for several years, reducing future demand for certificates. The reduction in demand for certificates led to a drop in the market value of certificates still being sold through the market, to the extent that the construction of new large-scale installations is no longer viable. This 'overhang' of certificates and the devaluation of RECs was noted by 18 respondents. While the crowding-out of large-scale renewable energy by excessive small-scale generation was remedied through the separation of the RET into the LRET and SRES, with separate GWh targets and certificate types, the REC overhang still exists, with many retailers still stockpiling enough RECs to meet obligations out to 2015/2016, essentially stalling investment in large-scale generation for the period between 2011 and 2015/16.

Kent and Mercer [6] found that mandating of particular technologies (through multiple certificates and excess quotas) was near unanimously opposed in submissions to the Tambling Review, as it was deemed as a way of 'picking winners' in regards to technology types as opposed to allowing the most economically efficient technologies to advance. Claims by small-scale renewable energy industry in the media that the Solar Credits Multiplier was required to promote the installation of systems and support the small-scale industry [32] were ultimately off-set by responses to the Issues Paper that the Solar Credits Multiplier was inefficient and resulted in unnecessarily high increases in electricity tariffs. Ross et al. [3] noted that renewable energy policies that generate high levels of industry growth over the short-term, but cannot be sustained financially, undermine long-term industry development. Furthermore, Valentine [33] indicated that the Solar Credits Multiplier was harmful to the renewable energy sector in that it allowed small-scale systems to outcompete utility-scale development. The Solar Credits Multiplier then proved all these assertions correct: it was

Table 2

Number of renewable energy certificates required under the RET 2009–2012, compared to an estimation of the number of 'phantom credits' generated in this period. Estimation of 'phantom credits' based on publicly available data on the number of systems installed by time period, postcode and average capacity of systems installed [27].

	2009–2012
Renewable energy certificate/large-scale certificate target [28]	47,763,000 certificates
Small-scale certificate target [29]	72,786,000 certificates
Phantom credits generated	79,605,000 certificates
<b>Phantom contribution</b>	<b>66%</b>

shown to increase the demand for small-scale solar photovoltaic systems to the extent that economies of scale were achieved, but it was also found to have negative, cascading effects across the renewable energy market and to all electricity consumers. That 87% of respondents referring to this line of question ( $N = 68$ ) either rejected the use of multipliers (or banding) in future, and/or noted the negative impacts of the Solar Credits Multiplier to the scheme, indicates that the Solar Credits Multiplier was ultimately deleterious to the RET scheme. Approximately 19% of respondents supported the use of multipliers (or banding), and then only in specific cases where generation of certificates was likely to be low, with many of these respondents also noting that the Solar Credits Multiplier had resulted in undesirable outcomes in the RET.

#### 4.3.4. Incumbent support for other technology types

There was considerable criticism within Issues Paper submissions regarding the inclusion of two additional support mechanisms for technologies. The inclusion of waste coal mine gas received particular criticism from respondents, in particular because this is not an 'ecologically sustainable' renewable energy source, as is stipulated in the RET legislation. The inclusion of waste coal mine gas is as a result of the harmonisation of jurisdictional targets prior to the 2009 expansion of the RET [1], including New South Wales' support for waste coal mine gas. As only waste coal mine gas generation systems built in New South Wales during its target scheme are supported competitive inequity exists between generators wanting to utilise waste coal mine gas. 64% of the respondents to this line of questioning ( $N = 42$ ) explicitly requested its removal from the RET, with only two respondents requesting that new waste coal mine gas be capable of generating certificates under the RET. The remainder of respondents all proposed maintaining the current arrangements, to provide on-going support to existing facilities or simply to ensure that the legislative framework remained unchanged.

The inclusion of technologies that do not generate electricity but may displace the use of electricity – so-called displacement technologies – was an area of contention within submissions, with 42% of respondents to this line of questioning supporting displacement technologies' removal from the scheme, and 39% supporting its expansion to other technology types ( $N = 31$ ). The 2001 MRET included support for small-scale solar water heaters and heat pump water heaters as a way of promoting investment in these

manufacturing industries in Australia [34]. While the majority of these systems are now imported into Australia the legacy of supporting this industry, particularly in light of its contribution to energy efficient technology uptake, has led to the view that support for this industry is still useful. The inclusion of solar water heaters and heat pump water heaters in the RET continues to be contentious, not only for the fact that these are not renewable electricity generation resources, but also because new displacement technologies, in particular cogeneration and ground source heat pumps, are not included in the RET.

The lack of alternative schemes to appropriately support waste coal mine gas generation and displacement technologies, and continuing concern that the carbon pricing mechanism may prove inadequate or be revoked, led the Climate Change Authority to recommend retaining both mechanisms, with the outcome that inequity will continue to exist between waste coal mine gas generators and elements of the displacement industry.

Lindblom's [35] 'disjointed incrementalism', where policy-makers pursue a limited range of well-analysed policy alternatives, is particularly relevant in this case, which sees an inherently conservative approach to policy-making preferred. Kent and Mercer [6] found this policy development technique was typified in the development of the former Liberal (conservative) Government's MRET. Consistent with the incremental policy development process, the Liberal Australian Government's response to the Tambling Review's findings had emphasised a 'business-as-usual' policy framework, with fossil-fuel continuing to dominate the energy sector in future. In this case the Climate Change Authority has also favoured a 'business-as-usual' policy framework that favours both the incumbent renewable generators, but also support mechanisms that may not serve the objectives of the RET to provide least-cost renewable generation.

#### 4.4. Climate change authority review recommendations and government response

On completing the consultation process, the Climate Change Authority produced a Final Review Report that included 34 recommendations for the Australian Government's consideration [1]. Of these 34 recommendations, 18 supported the existing scheme, five recommended further review, consultation or assessment and 11 proposed changes to the scheme (Table 3). Of these 11 only six

**Table 3**

Summary of the Climate Change Authority recommendations with regard to the Renewable Energy Target (including recommendation number), and the Australian Government response to these recommendations [1,8].

	Accepted	Further work required	Rejected
Recommendations for change	<ul style="list-style-type: none"> <li>- Four years between reviews recommended [1]</li> <li>- SRES should be phased out by reducing the deeming period, starting in 2017 [8]</li> <li>- Over-surrendered certificates to be refunded [17]</li> <li>- Changes to scheme administration [10,11,15]</li> </ul>	<ul style="list-style-type: none"> <li>- Large-scale consumers can 'opt in' to buy certificates directly from the market [13]</li> <li>- Partial Exemption Certificates for Emissions-Intensive Trade Exposed Industries made tradeable [21]</li> <li>- Self-generator definition amended to allow incidental off-take of electricity by community groups [24]</li> </ul>	<ul style="list-style-type: none"> <li>- Threshold for small-scale systems changed from 100 kW to 10 kW [6]</li> <li>- Clearing house to be converted to 'deficit sales house' [9]</li> </ul>
Recommendations for further review or consideration	<ul style="list-style-type: none"> <li>- Adjustments to targets beyond 2020 [4]</li> <li>- Level of Partial Exemption Certificate for Emissions Intensive Trade Exposed Industries considered by Productivity Commission [19]</li> <li>- Consider impact of RET on competitiveness of emissions intensive trade exposed industries [20]</li> <li>- Align auditing between RET and other Commonwealth reporting measures [22]</li> </ul>		<ul style="list-style-type: none"> <li>- Further analysis into inclusion of Native Forrest biomass in the RET [28]</li> </ul>
Recommendations for maintenance of existing characteristics	<ul style="list-style-type: none"> <li>- 18 recommendations for no change [2,3,5,7,12,14,16,18,23,25–27,29–34]</li> </ul>		

were accepted outright, with three of these accepted recommendations covering minor administrative components of the scheme [8]. The key recommendation accepted by the Australian Government confirmed that the periodical review process would be undertaken only once every four years. The other recommendation with appreciable effects on the renewable energy industry related to the decision to reduce the deeming of certificates from 15 years, however this will not come into effect until 2017.

The review process therefore supported relatively incremental changes to the policy. Given no great changes have been suggested to promote increased uptake of renewable energy, or conversely to provide additional support for electricity consumers suffering under the burden of the RET, the review process is likely to have caused more harm than good purely by introducing a perception of policy uncertainty. While the outcomes of the review process suggest that the Climate Change Authority has taken heed of the advice from industry to minimise changes to the scheme, and the Australian Government has gone one step further to maintain the status quo within the Scheme, there may be value in determining whether the Review should have been undertaken at all, particularly given the Australian Government's apparent preference for maintaining the status quo in the majority of review processes.

The case of the 2012 Climate Change Authority Review of the RET, and the Australian Government's response, could therefore be considered 'choreographed consultation'. Cheeseman and Smith [36] found that a consultative policy-development process resulted in little actual influence on policy direction, but that the consultation process garnered support for policies already in train. If anything, the RET review process allowed the Australian Government to cite support from a variety of stakeholders, including industry and the general public, with regard to the implementation of policies to support renewable energy in Australia. In doing so, the Australian Government was able to rebuke claims from industry that it would be in Australian consumers' best interests to support a decrease to the 45,000 GWh target.

## 5. Conclusion

The submissions to the RET Issues Paper demonstrate that while the RET mechanism is increasing the penetration of renewable technologies within Australia, and stakeholders, including industry and the general public, are largely supportive of the Scheme, there are misgivings about some elements of the operation of the Scheme. Primarily, stakeholders perceive that the RET would be more successful if it was devoted to least-cost renewable technologies, and therefore sub-schemes that favour technology types should not be included under the Scheme. The overwhelming conclusion that can be drawn from the submissions, however, is that uncertainty within the policy environment remains the key threat to meeting the RET scheme Target. This uncertainty is felt through the unknown interaction between the RET and the carbon pricing mechanism, the frequent introduction of review processes that undermine investment certainty and the interaction between state-based policies and the renewable energy industry. The necessity of ensuring a set GWh target for the RET, and providing confidence to investors that this will not be amended, regardless of future potential review processes, cannot be overstated. While the Climate Change Authority's recommendation to maintain the current GWh target, and increase the time between reviews from two years to four years, goes some way to increasing confidence within the renewable energy industry, the potential renegotiation of the target and re-review of the Scheme should the Australian Government change hands in September 2013, undermines these efforts. In order for there to be true confidence in the Target, bipartisan support of the

RET, and implementation of all agreed recommendations of the Climate Change Authority, is required.

## Disclosure statement

The primary author was employed as an energy policy officer for the Western Australian Government from 2009 to 2012. She was not involved in the development of State responses to the Renewable Energy Target, nor to the Climate Change Authority's Review process. No funding has been received relating to this research.

## Acknowledgements

The authors would like to acknowledge the assistance of the Climate Change Authority in providing access to missing Issues Paper submissions.

## References

- [1] Climate Change Authority. In: Climate Change Authority, editor. Renewable energy target review – final report. <http://climatechangeauthority.gov.au/ret/>; 2012.
- [2] Department of Climate Change and Energy Efficiency. In: Australian Government, editor. RET scheme updates. <http://www.climatechange.gov.au/government/initiatives/renewable-target/progress.aspx>; 2013.
- [3] Ross S, McHenry M, Whale J. The impact of state feed-in tariffs and federal tradable quota support policies on grid-connected small wind turbine installed capacity in Australia. *Renew Energy* 2012;46:141–7.
- [4] White W, Lunnan A, Nybakk E, Kulicic B. The role of governments in renewable energy: the importance of policy consistency. *Biomass Bioenergy* 2013;57:97–105.
- [5] Effendi P, Courvisanos J. Political aspects of innovation: examining renewable energy in Australia. *Renew Energy* 2012;38:245–52.
- [6] Kent A, Mercer D. Australia's mandatory renewable energy target (MRET): an assessment. *Energy Policy* 2006;34:1046–62.
- [7] Climate Change Authority. In: Climate Change Authority, editor. Renewable energy target. <http://climatechangeauthority.gov.au/ret/>; 2013.
- [8] Australian Government. In: Australian Government, editor. Australian government response to the climate change authority's renewable energy target review final report. <http://www.climatechange.gov.au/media/whats-new/~media/publications/renewable-energy/governmentt-response-to-cca-review-pdf.pdf>; 2013.
- [9] Australian Greenhouse Office. In: Australian Government, editor. Renewable opportunities – a review of the operation of the renewable energy (electricity) act 2000. <http://catalogue.nla.gov.au/Record/3085554>; 2003.
- [10] Jones S. The national renewable energy target: an example of post-machiavellian policy-making? *Aust J Public Admin* 2010;69:165–77.
- [11] BREE. In: BREE, editor. 2012 Australian energy statistics. <http://www.bree.gov.au/publications/aes-2012.html>; 2012.
- [12] Parliament of the Commonwealth of Australia. Renewable energy (electricity) act 2000. C2011C00923; 2011.
- [13] Climate Change Authority. In: Climate Change Authority, editor. Renewable energy target review – issues paper. <http://climatechangeauthority.gov.au/ret/>; 2012.
- [14] Fitzpatrick S, Owens J. Climate chiefs face Tony Abbott's axe. *The Australian* 2013. Australia.
- [15] Parliament of the Commonwealth of Australia. Renewable energy (electricity) bill 2000. C2004B000713; 2000.
- [16] Parliament of the Commonwealth of Australia. Renewable energy amendment (increased mandatory renewable energy target) bill 2008. C2008B00268; 2008.
- [17] Parliament of the Commonwealth of Australia. Renewable energy (electricity) amendment bill 2010. C2010B00086; 2010.
- [18] Parliament of the Commonwealth of Australia. Renewable energy (electricity) act 2000. C2009C000278; 2009.
- [19] Parliament of the Commonwealth of Australia. Renewable energy (electricity) amendment act 2009. C2009A00078; 2009.
- [20] Parliament of the Commonwealth of Australia. Renewable energy (electricity) amendment bill 2009 – explanatory memorandum. C2009B00115; 2009.
- [21] Hepworth A, Crowe D. Scheme's cost estimated at \$1.8bn a year. *The Australian* 2012.
- [22] Manning P. Origin attacks renewable energy target. *Sydney Morning Herald* 2012.
- [23] AAP. Origin energy attacked for questioning RET. *Sydney Morning Herald* 2012.
- [24] Thornton K. Origin's backward thinking on renewables. *Renew Econ* 2012.
- [25] Crase L, Dollery B, Wallis J. Community consultation in public policy: the case of the Murray–Darling Basin of Australia. *Austral J Polit Sci* 2005;40:221–37.

- [26] AGL Energy. In: Climate Change Authority, editor. AGL energy response to the climate change authority's renewable energy target review issues paper. <http://climatechangeauthority.gov.au/submissions/received%20#written>; 2012.
- [27] Clean Energy Regulator. In: Australian Government, editor. List of SGU/SWH installations by postcode. <http://ret.cleanenergyregulator.gov.au/REC-Registry/Data-reports>; 2013.
- [28] Clean Energy Regulator. In: Australian Government, editor. Renewable power percentage. <http://ret.cleanenergyregulator.gov.au/For-Industry/Liable-Entities/Renewable-Power-Percentage/rpp>; 2013.
- [29] Clean Energy Regulator. In: Australian Government, editor. Small-scale technology percentage. <http://ret.cleanenergyregulator.gov.au/For-Industry/Liable-Entities/Small-scale-Technology-Percentage/stp>; 2013.
- [30] Solar Energy Industries Association Inc. In: Climate Change Authority, editor. Submission for the RET review. <http://climatechangeauthority.gov.au/submissions/received%20#written>; 2012.
- [31] Australian PV Association. In: Climate Change Authority, editor. APVA response to the climate change authority renewable energy target review issues paper. <http://climatechangeauthority.gov.au/submissions/received%20#written>; August 2012.
- [32] Ecogeneration. Industry talks solar multiplier phase-out. *Ecogeneration* 2013.
- [33] Valentine S. Braking wind in Australia: a critical evaluation of the renewable energy target. *Energy Policy* 2010;38:3668–75.
- [34] Gas Industry Alliance. In: Climate Change Authority, editor. Response to renewable energy target (RET) review issues paper. <http://climatechangeauthority.gov.au/submissions/received%20#written>; 2012.
- [35] Lindblom CE. Still muddling, not yet through. *Publ Admin Rev* 1979;39: 517–26.
- [36] Cheeseman G, Smith H. Public consultation or political choreography? The Howard Government's quest for community views on defence policy. *Austral J Int Affairs* 2001;55:83–100.