



Australian Government

Department of the Environment

RENEWABLE ENERGY TARGET

Post Implementation Review of the Government's decision in late 2007 to expand the Mandatory Renewable Energy Target from 9,500 gigawatt-hours (GWh) to 45,000 GWh by 2020

Prepared: 1 December 2014

Revised: 20 May 2015

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PURPOSE OF THE POST-IMPLEMENTATION REVIEW

The purpose of this post implementation review (PIR) is to assess whether the 2007 decision by the then Government to expand the Renewable Energy Target (RET) from 9,500 gigawatt-hours (GWh) to 45,000 GWh to achieve a 20 per cent share for renewables in Australia's electricity mix by 2020, as implemented in through amendments to the *Renewable Energy (Electricity) Act 2000* and associated regulations, remains appropriate and how efficient and effective it has been in meeting its objectives.

In accordance with Australian Government's *Best Practice Regulation Handbook* (June 2010) a Regulation Impact Statement (RIS) is required for all decisions made by the Australian Government and its agencies that are likely to have a regulatory impact on business or the not-for-profit sector, unless that impact is of a minor or machinery nature. A proposal that proceeds to the decision maker without a RIS requires a Post Implementation Review (PIR), commencing within one to two years of the regulation being implemented.

The expansion of the RET was a 2007 election commitment which was confirmed by the incoming Government and implementation commenced soon after the election. Due to a compressed timeframe, a RIS was not prepared to inform the then Government's decision to expand the RET scheme. As such, the then Department of Climate Change and Energy Efficiency (DCCEE) was required to conduct a PIR within two years of implementation.

Further amendments to the RET scheme legislation in mid-2010 introduced a requirement for a statutory review of the RET in 2012. In light of these amendments, a decision was taken to delay the PIR so that it could incorporate the findings from this review. The Climate Change Authority completed the review in December 2012. However, the PIR was delayed further due to the federal election in September 2013 (including the preceding caretaker period) and the current Government's announcement in February 2014 that it would commission an independent review of the RET.

The 2014 RET Review and the Post Implementation Review Requirements

On 17 February 2014, the Australian Government appointed an Expert Panel to undertake a review of the RET, comprising of Mr Dick Warburton AO LVO (chair), Dr Brian Fisher AO PSM, Ms Shirley In't Veld and Mr Matt Zema, with support provided by a Secretariat in the Department of the Prime Minister and Cabinet. The review examined the operation and costs and benefits of the *Renewable Energy (Electricity) Act 2000* and related regulations, and the RET scheme constituted by these instruments. The Report of the Expert Panel was released on 28 August 2014 and is provided at [Attachment A](#).

The 2014 review of the RET by an independent expert panel meets most of the requirements for the PIR, including:

- *Impact analysis* – The review considered the economic, social and environmental impacts of the regulation on business and communities; outcomes since implementation; future

costs and benefits based on electricity market modelling; and the net impact on the community as a whole;

- *Stakeholder consultation* – The review undertook extensive consultation with business and community stakeholders. This included a public submissions process which attracted around 1,000 detailed submissions and over 23,000 letters and emails. In addition, the panel participated in 100 face-to-face meetings with more than 200 stakeholders representing the renewable industry, electricity retailers and generators, electricity consumers, environmental and welfare groups, and state and territory governments.
- *Benefit analysis* - This included consideration of the continued appropriateness of the policy in terms of net benefit to the community as well as the effectiveness and efficiency of the regulation in addressing the problem and achieving stated objectives; and
- *Implementation issues* – This included consideration of the RET’s performance since expanded in 2009 and lessons learned from scheme performance to date. The review also considered the role of the Clean Energy Regulator in effectively and efficiently administering the scheme’s operation, and identified implementation issues associated with recommended improvements to scheme design.

This document focuses on those PIR requirements that were not directly addressed by the RET review. Specifically, it provides additional information about:

- the problem the RET scheme was designed to address;
- the objective of Government action;
- the policy options considered; and
- an estimate of regulatory costs

References are made to the 2014 RET Review report as necessary and appropriate.

BACKGROUND ON THE RENEWABLE ENERGY TARGET SCHEME

In 2000, the Mandatory Renewable Energy Target (MRET) was introduced to deliver a two per cent increase in the proportion of electricity supplied from renewable sources by 2010. The MRET encouraged additional investment in generation by market-ready renewable energy technologies to reduce greenhouse gas emissions. To achieve this at least cost, the MRET legislation included a mechanism of tradable certificates.

To provide certainty for investors and other certificate market participants, the two per cent target was expressed as a fixed target of 9,500 GWh for 2010.

In 2003, the MRET underwent a statutory review (the Tambling Review), which found that the MRET would not be able to deliver sustained growth in investment in renewable energy, particularly large-scale projects, as the legislated target would be achieved well before 2010. The Tambling Review recommended expanding the target to 20,000 GWh by 2020; however, the then Government chose to maintain the 9,500 GWh target.

By 2007, there was sufficient renewable energy generation capacity in place to meet the MRET scheme’s legislated targets and investment declined significantly. Only the voluntary GreenPower

scheme and small isolated State schemes (in place in Victoria and under development in New South Wales) provided deployment support for large-scale renewables.

In late 2007, the then Government committed to ensuring that the equivalent of at least 20 per cent of Australia's electricity supply is generated from renewable sources by 2020, by expanding and extending the MRET scheme. To fulfil this commitment, it decided to increase the MRET of 9,500 gigawatt-hours (GWh) in 2010 to 45,000 GWh in 2020. It also decided to extend the MRET from 2020 to 2030. The expanded RET was designed in co-operation with the states and territories through COAG, informed by extensive consultation with business and community stakeholders. Agreement was reached in April 2009 and the *Renewable Energy (Electricity) Act 2000* was amended accordingly. The expanded scheme became known as the Renewable Energy Target (RET) scheme.

In 2010, amendments were passed to separate the RET scheme into two parts: the Large-scale Renewable Energy Target (LRET) and the Small-scale Renewable Energy Scheme (SRES). Higher than expected uptake of small-scale systems – stimulated by falling system costs, the financial incentives offered through the Solar Credits multiplier and state and territory feed-in tariffs – had created a large spike in the number of certificates. This depressed certificate prices and discouraged investment in large-scale projects, which have large capital requirements. By creating separate incentives for large-scale projects and small-scale technologies effective from 1 January 2011, large-scale and small-scale technologies would no longer directly compete with one another under the RET scheme.

The LRET is expected to deliver the majority of the target – 41,000 GWh of the original 45,000 GWh 2020 target – and retains many of the design features of the original MRET scheme. The SRES is uncapped but has an implicit target of 4,000 GWh of renewable energy generation or displacement of electricity through solar water heaters and heat pumps.

The RET legislation provides for statutory reviews, the first of which took place in the second half of 2012. The CCA, which undertook the review, submitted its final report on the RET scheme on 19 December 2012 in which it made 34 recommendations. The CCA found that the scheme was on track to achieve its policy goal and that continued policy stability will be important in ensuring success. As such, the CCA recommended the key RET parameters, including separate support for large-scale and small-scale technologies and the current profile of annual targets under the large-scale component, be maintained while making suggestions to improve operational efficiency for stakeholders. In its response on 21 March 2013, the then Government agreed with the CCA's focus on policy stability and predictability, agreeing to maintain the current structure and annual legislated targets, accepting most of the CCA's recommendations.

As previously noted, the current Government commissioned an independent review of the RET in 2014. The Report of the Expert Panel was released on 28 August 2014, finding that the RET has encouraged significant new renewable electricity generation, which has almost doubled as a result of the scheme. The panel made twelve recommendations to reform the RET and the Government is currently considering its response to the report.

PROBLEM

In late 2007, concerns were growing globally about the emerging threat of climate change, with greenhouse gas emissions from fossil energy production recognised as a key contributor. Australia's predominantly coal-based electricity mix was contributing around a third of all its greenhouse gas emissions and electricity demand was rising significantly. Despite Australia's strong renewable energy resources and the success of the MRET in increasing uptake, renewables contributed less than ten per cent of Australia's electricity mix.

Sufficient renewable energy generation capacity had already been put in place, ahead of schedule, to meet the MRET's legislated annual targets through to 2020. With no further investment signal from the MRET, investment in the large-scale renewable energy industry had stagnated. For example, contraction of the large-scale wind sector, which had emerged since 2001 under the encouragement of the MRET, was reflected in the closure of a turbine assembly plant in northern Tasmania and a blade manufacturing plant in south-western Victoria.

At the same time, in the absence of other policy support to sustain the renewable energy industry, a patchwork of state and territory schemes was emerging. Victoria had put in place a legislated scheme based broadly on the national scheme, New South Wales was developing legislation along similar lines, and other states were considering similar schemes.

OBJECTIVE OF GOVERNMENT ACTION

The primary objective of the then Government's initiative to expand the legislated RET target was to provide a sufficient incentive to accelerate the deployment of market-ready renewable energy, enabling the renewable energy industry to make a sustained contribution to reducing the emissions intensity of Australia's electricity mix.

The then Government aimed to achieve this objective at minimal cost through a market-based, technology-neutral, nation-wide initiative while avoiding the unnecessary costs inherent in multiple isolated state and territory target schemes.

POLICY OPTIONS CONSIDERED

The then Government had made an election commitment to expand the MRET when it was in opposition in 2007. The Department of the Environment is not aware of what other options, if any, were considered prior to the election commitment being made.

The then Government decided that the most efficient and effective way of incentivising investment in renewable energy technology while achieving emissions reductions was to increase the RET target to 20 per cent in 2020 based on international practice and estimates of electricity demand at the time. The decision to confirm the new Government's election commitment to increase the RET target was not informed by a RIS or other consideration of options.

IMPACT ANALYSIS

The 2014 RET review examined the performance of the RET against its policy objectives (refer to Chapter 2 of the report) and the impacts of the RET on key stakeholder groups (refer to Chapters 3, 5, 7 and 9 of the report). The Department considers that the analysis undertaken as part of this review meets the PIR requirement to analyse the impacts of the regulation. Below is a summary of the review's key findings.

The review found that the RET scheme has broadly met its objectives. The RET scheme has encouraged significant additional renewable electricity generation, with output from large-scale renewable generators having almost doubled as a result of the scheme. Installations of small-scale systems have exceeded expectations, with output from these systems already exceeding levels anticipated for 2020. To date, the RET has delivered a modest level of carbon dioxide equivalent emissions reductions.

Analysis undertaken for the review suggests that, overall, the net impact of the RET on retail electricity prices and electricity bills appears to be small. The impact on household electricity bills is estimated to be around four per cent in 2013-14 and higher for energy-intensive businesses. The RET helps households with the cost of installing their own rooftop solar PV systems, providing an opportunity for households to save on electricity bills.

Businesses conducting emissions-intensive trade-exposed (EITE) activities receive an exemption for a portion of RET costs in recognition that these businesses are price takers in a global market. Many EITE businesses claim that the current exemption is not sufficient to prevent a loss of global competitiveness as a result of the additional cost of the RET.

The RET has stimulated employment opportunities in the renewable energy and associated industries. However, some submissions argued that this employment occurs as a result of a cross-subsidy that transfers investment from elsewhere in the economy and is offset by other job losses, such as jobs at fossil-fuel generation plants. The review found that that the RET does not result in an increase in employment at a national level.

Many regional and rural communities have benefited from the increased investment in their regions. There is also potential for renewable energy to reduce the grid dependency of rural communities.

The panel received some submissions raising concerns about adverse health impacts of wind farms. The Australian Government made a commitment to establish an independent research program to examine the potential effects of wind farms on human health. The National Health and Medical Research Council (NHMRC) is overseeing this programme.

Regulatory cost impact

The Department has estimated the average annual impact of the decision to expand the MRET over the ten-year period from the beginning of 2010 to the end of 2019 to be an increase of approximately \$1.66 billion in nominal terms.

This cost impact arises through changes in the number and price of certificates required to be purchased and surrendered by liable entities to meet the scheme's higher targets and in the number of transactions undertaken by scheme participants to comply with the legislative rules for creating and surrendering these certificates.

In estimating the impacts, the Department drew on:

- the CER's historical data for 2010 to 2014 which included the uptake of large-scale and small-scale renewable energy systems and certificate surrenders and prices, along with CER's experience and insights into the types and duration of activities undertaken by the regulated community; and
- modelled estimates of renewables uptake and certificate prices over the period 2015-2020 undertaken by ACIL Allen Consulting for the 2014 Warburton review of the RET scheme and other modelling commissioned by the Clean Energy Regulator to inform the setting of the 2015 certificate obligation (and non-binding estimates for 2016 and 2017 under the small-scale component of the RET).

While the regulatory costs of the expanded RET as it has evolved since 2010 and the likely path to 2020 can be estimated, any estimate of the regulatory costs that would have been incurred had the original MRET remained in place is inherently speculative. For example, given the range of global and local factors influencing the uptake of small-scale renewables in Australia over the past five years in addition to the RET, the confidence level of any estimate that separately quantifies the RET effect would be relatively low.

In the absence of more definitive information, we have assumed small-scale renewable uptake would have grown under the original MRET at half the rate observed and forecast under the current RET. Noting that sufficient investment to meet the 2010-2020 targets was already in place well prior to 2010, it has also been assumed that no further large-scale renewable power stations would have become accredited post-2009.

As such, our estimate of the difference in regulatory cost between the current RET and a hypothetical extrapolation of the original MRET is necessarily indicative.

Over 98 per cent of this cost (around \$1.63 billion per year on average) arises through the purchase of additional renewable energy certificates, at higher unit costs, to meet the larger targets under the expanded RET. This compliance cost is incurred directly by approximately 100 liable entities (mainly electricity retailers) and passed on to millions of homes and businesses across Australia through their electricity bills.

Around \$30 million (under two per cent) of the regulatory cost is due to higher transaction costs, predominantly through the higher number of transactions made by the regulated community in creating and surrendering additional certificates to meet the higher targets. The transaction cost impact has been estimated in consultation with the CER which has strong insights into the types and costs of transactions by the regulated community.

The regulated community is comprised of several thousand businesses supplying, installing and/or operating small-scale and large-scale renewable energy installations or providing services as certificate market intermediaries. In addition, there are around 100 liable entities as mentioned above and around 150 entities who undertake activities prescribed under the RET rules as emissions-intensive and trade-exposed.

Households purchasing RET-eligible small-scale systems for which they are entitled to create certificates are also part of the regulated community. However, as the vast majority assign this right to their supplier or other market intermediary in return for a system price discount or cashback, the impact is very small at an individual level, particularly in comparison to the benefit received.

CONSULTATION

As part of the 2014 RET Review, the expert panel undertook an extensive consultation process (refer to Chapters 2, 3, 5, 7 and 9 of the report). The Department considers that this consultation process meets the PIR requirement to consult stakeholders and present findings from consultation. Below is a summary of the review's key findings.

Most stakeholders acknowledged that the RET delivered on its objectives. However, some industry stakeholders argued that the RET encourages inefficient investment in non-competitive renewable energy, which displaces fossil fuel generation and reduces emissions at a high cost. They supported modification of the RET to reduce the overall costs of the scheme. Others, particularly stakeholders in the renewable energy sector and community groups, argued the RET encourages deployment of the most cost-effective commercial renewable energy technologies and achieves relatively low-cost abatement. They did not support any changes to the scheme.

CONCLUSION

Expanding the RET from 9,500 GWh to 45,000 GWh has met the intended policy objectives to encourage the additional generation of electricity from renewable sources and reduce emissions of greenhouse gases in the electricity sector.

As a single national scheme, it avoids the additional administrative and compliance-related costs inherent in multiple individual state-based schemes.

However; in its August 2014 report of the RET review, the Expert Panel recommended that the RET should be amended in light of the changing circumstances in Australia's main electricity markets and the availability of lower cost emission abatement alternatives. Since the expansion of the RET in 2009, Australia has experienced declining electricity market demand and the latest forecasts for 2020 are lower than previous forecasts. This has reduced the need for significant further investment in large-scale generation.

The panel recommended that the LRET be either closed to new entrants (and targets reduced accordingly) or that growth in future LRET targets be limited to 50 per cent of overall electricity demand growth. For the SRES, the panel recommended that it be either terminated immediately or phased out by 2020.

In light of the above, on 22 October 2014 the Government announced that it is seeking bipartisan support to amend the RET with a view to providing certainty for the renewable energy sector while better reflecting the market need for new generation and restoring competitiveness to industry.

The Minister for Industry and Science and the Minister for the Environment subsequently announced on 18 May 2015 that the Government would introduce legislation to:

- lower the LRET in 2020 to 33,000 GWh;
- provide a full exemption from the RET for emissions-intensive, trade-exposed activities;
- reinstate native forest wood waste as an eligible renewable energy source under the LRET; and
- remove the statutory requirement for a review of the RET every two years.

The Government also indicated that there would be no change to the SRES.

ATTACHMENT A – REPORT OF THE EXPERT PANEL