14 September 2012

Anthea Harris
CEO
Climate Change Authority
GPO Box 1994
Melbourne VIC 3001

By email: submissions@climatechangeauthority.gov.au

Dear Ms Harris

Renewable Energy Target Review - Issues Paper

Pacific Hydro is pleased to have the opportunity to provide comments to the Climate Change Authority in relation to the 2012 Renewable Energy Target (RET) Review.

Pacific Hydro is a leading Australian renewable energy company with over 20 years' experience in project finance, development, construction and operation of hydro, wind, solar and geothermal power projects in Australia, Brazil and Chile.

Pacific Hydro is a wholly owned subsidiary of the Industry Funds Management (IFM) Australian Infrastructure Fund through which Pacific Hydro provides sustainable infrastructure investment opportunities for around 5 million Australian superannuants. We are proud to continue to provide strong returns for the environment, local communities and investors.

Response to the Issues Paper

Our comments in response to the RET Review Issues paper, in the attached document, are split into three sections.

Firstly, we provide a section covering our overall comments and principal issues and make clear recommendations to the Authority with regard to the impact of major legislative change on ordinary Australians and the main threat to the RET delivering on its objectives.

Secondly, we respond to the seven evaluation criteria in the context of the scope of the Review. Considered against these criteria (economic efficiency, environmental effectiveness, equity, public interest, consumer price impacts, global climate change mitigation efforts, foreign policy and trade objectives), the Renewable Energy Target as it is currently legislated supports or strengthens each and every principle. Were major changes to be made, we consider that a number of these principles would be detrimentally affected. That said, throughout this section we do make a number of minor recommendations that would strengthen certainty and integrity of the RET against these criteria.

Thirdly, we raise a number of other matters of relevance to the Review on the role of the CEFC and ARENA with respect to the RET as well as broader energy and climate change policy interaction, energy market reform, and network investment matters.

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Overall comments

The RET is designed to accelerate deployment of the least cost renewable generation to deliver on an identified gigawatt hour (GWh) target each year to 2020 and out to 2030. Stable policy will be the biggest factor in ensuring that investment occurs in an orderly manner to meet the target.

To date the RET has been the single largest abatement scheme in Australia, delivering over 22.5 Mt $CO_{2\text{-}e}$ via deployment of 13,700 GWh of utility scale generation and 1.5 million small sale installations. Already around $18.5 billion has been invested in new renewable generation and $3.7 billion worth of projects are currently under construction. A further $20-25 billion will be invested to meet the 45,000 GWh target.[1]

Industry evaluations of project announcements for large scale renewable generation show that there is more than sufficient capacity to deliver on the 2020 utility scale target of 41,000 GWh.[2]

We note that several broad ranging reviews and legislative changes have occurred over the life of the RET to date, but the fundamental objectives (least cost renewables deployment) and expression of the target in gigawatt hours remain key to investors and project developers.

Changing the way the target is expressed would further damage confidence and risk jettisoning a growing, sustainable industry just when the economy clearly needs to support growth outside of the mining sector. In our view, as long as its 'investment grade policy' status is reinforced through this review, the RET will continue to play its key role in delivering on the stated policy of the Government and the Coalition to cut Australia's emissions by 5% by 2020.

However, we are very concerned that this 'investment grade policy' status will undermined by moving from the current fixed GWh target to a floating, highly variable target.

A significant reduction in the target would directly translate to a significant reduction in revenue streams and destruction of value of existing renewable energy plant. It would also trigger a revaluation of all REC's held by buyers and sellers alike, would kill off approximately $10 billion in new capital investment and require project proponents to immediately write off a majority of project development costs.

All of these issues will have a direct and material impact on the financial position of all participants in the market and would raise the real prospect of those participants claiming compensation from the government for these losses.

In the context of recent changes[3] relating to the carbon price legislative package, the delivery of domestic abatement through the RET becomes even more important in terms of the overall environmental and economic integrity of Australia's carbon reduction measures.

While the carbon price also increases the drivers for this long term transition, the RET is still key to delivering deployment of renewable energy. In the context of our national and international commitments to reduce emissions, the RET is projected to reduce emissions by 380 Mt in the period to 2020[4] in support of those ambitions and will pave the way for an orderly and long term transition to zero carbon energy.

Further to this, climate change policy architects should view the retirement of the oldest, least efficient thermal plant (as is occurring in South Australia) as a sign of success of the RET

[1] Analysis provided by the Clean Energy Council from a forthcoming report.
[2] Green Energy Markets – Renewable Energy Quarterly Review presentation, November 2011.
[3] Recent changes include arrangements regarding international carbon market links, the removal of the price floor, and the decision not to pursue 'contracts for closure' of 2000 MW.
[4] Analysis provided by the Clean Energy Council from a forthcoming report.

scheme and its objective to encourage the additional generation of electricity from renewable sources.

With the confluence of moderating demand and increased generation from wind energy the market has effectively delivered what contracts for closure program was designed to do.

It can be further argued that the RET, as a market based solution will deliver this transition in a far more economically efficient way and without the need for government to use consolidated revenue.

Principal comments in response to the Renewable Energy Target Review

It is not only renewable energy companies that would be affected by major changes to the RET, but the superannuation returns of ordinary Australian workers. Through our owner, IFM, as well as other superannuation funds, millions of Australians are invested in the Renewable Energy Target's longevity. As such, we urge the Authority to carefully consider the potential impact on the retirement savings from any major adjustment to the target which would damage investor confidence and certainty.

The deployment of renewable energy is valued by the broader Australian community, among whom support for renewable energy deployment ranges still sits at around 80 to 90 per cent.[5]

Australian's are also clearly able to identify that cleaner energy is better for our health, air, water and environment now and into the future.[6] Recent research from the Climate and Health Alliance and The Climate Institute reports that the benefit from each tonne of carbon reduction equates to a saving of $46 in health costs – twice value of Australia's starting price for carbon.[7]

The Renewable Energy Target is driving investment in renewables on the basis of this bi-partisan supported, successful measure which is already delivering around 10% of electricity generation.[8]

The legislation has been reviewed, effectively stalled, interfered with, extended, expanded and split into its core components over its first ten years of operation. Every time, investor certainty and confidence has been affected. The latest changes, which clarified the "at least" 45,000 GWh target and the market size for large scale (41,000 GWh) and small scale (uncapped) and wound out distortionary multipliers, have the support of the industry, legislators and policy makers.

We note that the expression in the legislation in terms of sent out generation provides certainty for investors, energy market institutions and energy market participants. Changing this would create serious sovereign risk issues and, in our view, add costs to end consumers.

Thus, in our view, the biggest threat to the delivery of the 45,000 GWh target would be the continuation of biennial and wholesale, legislative reviews. As such our two key recommendations to the Authority with regard to this review of the legislation are:

- *Make no changes to the Renewable Energy Target legislation except for the removal of the legislative requirement for biennial reviews.*
- *Make no adjustment to the existing legislated target for **at least** 45,000 GWh of renewable energy by 2020 with 41,000 GWh from large scale generation.*

[5] See for example Pacific Hydro 2012 http://www.pacifichydro.com.au/files/2012/01/2011-Community-Polling-Presentation-Results.pdf
[6] TCI. 2012. Climate of the Nation http://www.climateinstitute.org.au/verve/_resources/TheClimateOfTheNation2012_Final.pdf
[7] CAHA/TCI. 2012. "Our uncashed dividend" http://www.climateinstitute.org.au/verve/_resources/OurUncashedDividend_CAHAandTCI_August2012.pdf
[8] See for example, http://reneweconomy.com.au/2012/output-from-australias-coal-fired-generators-falls-10-per-cent-14287

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In our view, it should be up to the Authority (and the relevant Minister) to consult with the industry and investors directly especially with regard to longer term investment matters and market development towards the end of this decade. Such a step would be consistent with the practice in the broader energy market via electricity market institutions.

The prospect of continuing wide-ranging reviews, or the nonsensical idea to link the target to constantly changing demand forecasts, would freeze investment and reverse the opportunities in Australia for renewable energy development.

Yours sincerely

Andrew Richards
Executive Manager Government & Corporate Affairs
Pacific Hydro Australia

Encl: Pacific Hydro Submission to the Renewable Energy Target Review Issues Paper

PacificHydro

Renewable Energy Target Review

Response to the Issues Paper

Due: 14 September 2012

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1. Section 1: Overall comments and principal matters

1.1 Overall comments

The primary objective of the Renewable Energy Target is to drive a gradual change in the energy mix that will reduce emissions and manage the transition to cleaner energy.

To date the RET has been the single largest abatement scheme in Australia, delivering over 22.5 Mt $CO_{2\text{-}e}$ of abatement from 13,700 GWh of utility scale generation and 1.5 million small sale installations.

Already $18.5 billion has been invested in renewable generation with around $7.5 billion in large scale systems and $11 billion in small scale systems. $3.7 billion worth of projects are currently under construction and a further $20-25 billion will be invested to meet the 45,000 GWh target.[1]

Evaluations of project announcements for large scale renewable generation show that there is more than sufficient capacity to deliver on the 2020 target for large scale generation of 41,000 GWh.[2]

While a number of broad ranging reviews and legislative changes have occurred over the life of the RET to date, the fundamental objective of least cost renewables deployment and expression of the target in GWh remain key to investors and project developers.

While some are calling for change to the target on the basis of declining energy demand, as the CCA Issues Paper notes there are a number of inherent problems with pinning a target to unpredictable and fluctuating demand:

- electricity demand is inherently difficult to predict;
- the output of renewable energy generation, REC production and actual output in any given year may vary as will the output of pre-existing renewable energy generation (predominantly hydro based output reliant on rainfall);
- ongoing changes in weather systems, impacts of climate change, drought and natural weather variability all contribute to uncertainty about the actual level of renewable production; and
- the level of industrial production and economic growth will likely vary over time in response to global and domestic factors.

Further to this, climate change policy architects should view the retirement of the oldest, least efficient thermal plant (as is occurring in South Australia) as a sign of success of the RET scheme and its objective to encourage the additional generation of electricity from renewable sources. With the confluence of moderating demand and increased generation from wind energy the market has effectively delivered what contracts for closure program was designed to do.

It can be further argued that the RET, as a market based solution will deliver this transition in a far more economically efficient way and without the need for government to use consolidated revenue.

The RET, if left in its current state, is likely to continue to play this critical role of affecting an orderly transition to a cleaner, more secure and healthier energy supply system.

The Coalition, the original architects of the RET, designed the objectives of the target and its gigawatt hour expression to provide clear level of certainty to investors and liable parties in long-lived multi-decade projects. We note that the legislation enjoys bipartisan support and the coalition recently confirmed strong support of the renewable energy target.[3]

[1] Analysis provided by the Clean Energy Council from a forthcoming report.
[2] Green Energy Markets – Renewable Energy Quarterly Review presentation, November 2011.
[3] For example, Shadow Minister for Resources and Energy Ian MacFarlane told Clean Energy Week delegates in Sydney on 26 July, 2012 that the Federal Opposition remains committed to the Renewable Energy Target as the main driver of clean energy development in Australia. And Shadow Minister for Climate Action, Environment and Heritage Greg Hunt said on Tuesday 3 May 2011 in an interview with Steve Vizard on MTR "we created a Renewable Energy Target for Australia and then supported its extension. We want to do real things whether it's solar, wind, geothermal or tidal energy…"

In our view, as long as its 'investment grade policy' status is reinforced through this review, the RET will continue to play its key role in delivering on the stated policy of the Government and the Coalition to cut Australia's emissions by 5% by 2020.

However, we are very concerned that this 'investment grade policy' status will undermined by moving from the current fixed 45,000 GWh target to a floating, highly variable target.

A significant reduction in the target would directly translate to a significant reduction in revenue streams and destruction of value of existing renewable energy plant. It would also trigger a revaluation of all REC's held by buyers and sellers alike, would kill off approximately $10 billion in new capital investment and require project proponents to immediately write off a majority of project development costs.

All of these issues will have a direct and material impact on the financial position of all participants in the market and would raise the real prospect of those participants claiming compensation from the government for these losses.

In the context of recent changes[4] relating to the carbon price legislative package, the delivery of domestic abatement through the RET becomes critical in terms of delivering Australia's carbon reduction objectives.

In the context of Australia's national and international commitments to reduce emissions, the RET is projected to reduce emissions by around 380 Mt in the period to 2020[5] in support of those ambitions and continue to ensure an orderly longer term transition to zero carbon energy.

While the carbon price also increases the drivers for this long term transition, and more abatement is likely to be delivered with the carbon price *and* the RET, the RET is still key to delivering deployment of renewable energy.[6]

In our view, if actual sent out generation from renewable energy in 2020 to equates to more than "twenty per cent" of total demand, the RET will have been highly successful in driving our transition to a low carbon energy supply system. As noted by the Authority, there is a missing link between climate change and energy policies (discussed at **3.3**), with the *energy* market investment signals implying that new generation is not needed. However, climate change and renewable energy policy objectives imply (and drive) this investment to ensure that the transformation to clean energy can occur.

The cost of this transformation is relatively low and predictable with clear co-benefits to economic investment, energy security, immediate health benefits and environmental benefits with local and global impacts.

The transition to clean energy that is being driven by the RET fundamentally aligns with the national carbon reduction policy goals and with global ambitions to ensure that we burn far less fossil fuels by 2020 than we do now.

We should not retreat from this ambition and we must make use of the opportunity before us to deliver the required fundamental shift away from fossil fuels in an orderly manner over the coming decade.

1.2 Principal matters

1.2.1 Australian companies and workers have invested in renewable energy

The 45,000 GWh target was legislated and major investments have been made on the basis of this target being law and for its continuance in the form legislated In our view the existing fixed GWh target creates the foundation for an 'investment grade policy' and relatively stable investment climate over the coming decade.

[4] Recent changes include arrangements regarding international carbon market links, the removal of the price floor, and the decision not to pursue 'contracts for closure' of 2000 MW.
[5] Analysis provided by the Clean Energy Council from a forthcoming report.
[6] Analysis provided by the Clean Energy Council from a forthcoming report.

We are very concerned that this 'investment grade policy' status will undermined by moving from the current fixed GWh target to a floating, highly variable target. Based on current energy demand projections, the new target would fall to approximately 26,000GWh while the price of Renewable Energy Certificates would fall by as much as 60% to a low of $16.00. This would represent a significant reduction in revenue streams and destruction of value of existing renewable energy plant, would trigger a revaluation of all REC's held by buyers and sellers alike, would kill off approximately $10 billion in new capital investment and require project proponents to immediately write off a majority of project development costs. All of these issues will have a direct and material impact on the financial position of all participants in the market and would raise the real prospect of those participants claiming compensation from the government for these losses.

It is not only renewable energy companies that would be affected by major changes to the RET, but the superannuation returns of ordinary Australian workers. There are literally hundreds of businesses representing millions of Australian investors involved in renewable energy. These businesses represent a cross section of investor owned, government owned and private companies that have directed capital to projects under the RET framework.

In the case of Pacific Hydro specifically, through our owner, IFM, up to 5 million Australian superannuants have invested in the Renewable Energy Target's longevity. From a sovereign risk perspective, these investors, and their reach should be carefully considered in any discussion of change to the legislation.

Pacific Hydro is very concerned that a number of commentators have proposed major changes to the target,[7] or even repeal of the RET, by purporting to be concerned about costs to consumers. In our view the adoption of their position, and any such change, would create additional uncertainty which translates to increased costs to consumers.[8]

A recent presentation from Bloomberg New Energy Finance showed very clearly that reducing the renewable energy target would not only create serious sovereign risk but would jettison $10 billion in regional investment, taking opportunities away from Australian companies, workers and communities.

In the context of investor certainty and risk as outlined above, we urge the Authority to carefully consider the potential impact on the retirement savings from any major adjustment to the target.

1.2.2 The greatest risk

The prospect of continuing wide-ranging reviews, or the nonsensical idea to link the target to constantly changing demand forecasts, would freeze investment and reverse the opportunities in Australia for renewable energy development.

The legislation has been reviewed, effectively stalled, interfered with, extended, expanded and split into its core components over its first eleven years of operation. Every time, investor certainty and confidence has been affected.

The latest changes – which clarified the "at least" 45,000 GWh target, the market size for large scale of 41,000 GWh, small scale (uncapped) and wound out distortionary multipliers – have the support of the clean energy industry, Australian manufacturing businesses, NGOs, legislators and policy makers.

In our view, the biggest threat to the delivery of the 45,000 GWh target would be the continuation of biennial and wholesale, legislative reviews. As such our two key recommendations to the Authority are:

[7] Most proposals focus on linking to electricity demand. However, estimating electricity demand is an inherently uncertain task. Altering the policy framework that underpins billions of dollars in investment because current mid-term AEMO projections might suggest continued demand reductions would be a recipe for policy error and perpetual tinkering with the target. As various experts have noted average and even peak demand rates in recent years have been much lower than expected, in part because of the impact of the La Nina weather patterns which have resulted in cooler and wetter summers. However this cycle is temporary and the next few years may see a sharp increase in demand – no one actually knows what will happen. To tie a major investment related policy to such uncertainty is unwise.

[8] This issue is explored further by AGL in their Working Paper #35 – LRET 'An analysis of Australia's Large Scale Renewable Energy Target: restoring market confidence.

- *Make no changes to the Renewable Energy Target legislation except for the removal of the legislative requirement for biennial reviews.*
- *Make no adjustment to the existing legislated target for **at least** 45,000 GWh of renewable energy by 2020 with 41,000 GWh from large scale generation.*

In our view, it should be up to the Authority (and the relevant Minister) to consult with the industry and investors directly especially with regard to longer term investment matters and market development towards the end of this decade. Such a step would be consistent with the practice in the broader energy market via electricity market institutions.

In our own experience, the prospect of this Review has dampened investor confidence and heightened the risk-premium attached by financiers. Pacific Hydro has direct experience of the impact of this uncertainty. A retailer has deferred negotiation of a PPA for a project that is fully permitted and ready to go ahead subject to an off-take agreement.

Further, the last few years have been characterised by a confluence of factors which have all contributed to project developer and investor anxieties including:

- over-stimulated (state-based) incentives for small scale solar PV combining with REC multiplier effect reducing market need for project contracting;
- limited PPA market liquidity;
- ongoing impacts of the GFC and tighter domestic and international credit conditions;
- lower manufacturing and production output (and lower industrial electricity demand) as a result of dampened global economic conditions;
- increased consumer awareness and attention to electricity bills rising significantly in the past few years due in large part to the impact of network investment;[9]
- energy efficiency activities and markedly increased penetration of solar PV reducing electricity demand;
- over two years of relatively mild weather due to the La Nina pattern and consequent reduced number of peak demand days;
- continued penetration of air conditioning units in Australian households and businesses whose impact on peak demand is unpredictable; and
- the prospect of the wide-ranging review of the RET legislation, objectives and operations.

Many of the above effects are outside the control of Government and simply relate to economic and climate conditions which will no doubt change markedly over the next two decades.

Others effects will likely continue to feature in the Australian electricity market such as high (and unpredictable) peak demand[10] that will occur in parallel to lower growth rates in overall demand driven by energy efficiency, installation of PV and changing consumer consumption patterns.

While the impact of small scale certificates on contracting appetite is abating with the three largest retailers all announcing PPAs for new projects in recent months, this review and further legislative reviews is creating market uncertainty and dampening investor sentiment.

1.2.3 Health co-benefits supported by renewable energy

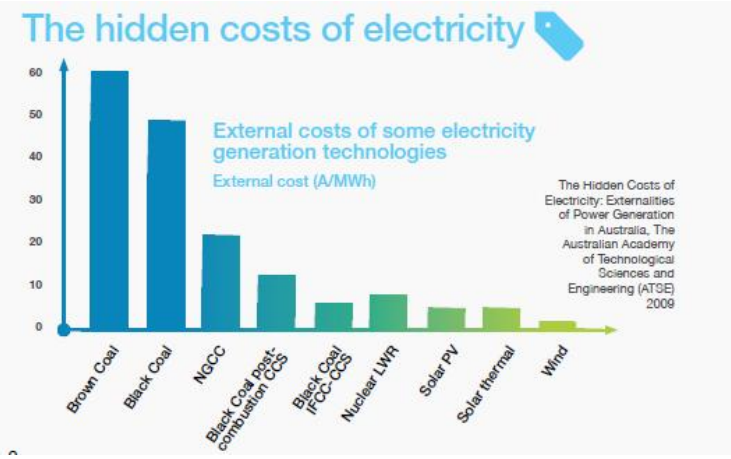
The deployment of renewable energy is overwhelmingly supported by the Australian community, with surveys consistently recording around 80 to 90 per cent supporting or strongly supporting renewable energy like solar, wind, and geothermal.[11]

[9] Dept of Resources Energy and Tourism. 2012. ' Fact sheet: electricity prices'.
[10] Sandiford, M. 2012. The Conversation. 'The problem in the grid'. 6 August 2012. https://theconversation.edu.au/the-problem-in-the-grid-8868
[11] See for example Pacific Hydro 2012 http://www.pacifichydro.com.au/files/2012/01/2011-Community-Polling-Presentation-Results.pdf and The Climate Institute. 2012. Climate of the Nation http://www.climateinstitute.org.au/verve/_resources/TheClimateOfTheNation2012_Final.pdf http://www.climateinstitute.org.au/verve/_resources/TCI_ClimateOfTheNation_EnergyFactsheet_July2012.pdf .

Australians rightly see renewable energy as playing an important role in the reduction of carbon emissions, job creation, preparing Australia for the impacts of climate change, improving health and the local environment, and in building a sense of national pride. Australian's are clearly able to identify that cleaner energy is better for our health, air, water and environment now and into the future.[12]

Research published in 2009 found that thousands of lives could be saved from shifting to cleaner energy generation, as this reduces the risks and impacts of fossil fuel generation.[13] Research published earlier this year identified the rate of lung cancer in Port Augusta is twice the national average, with clear links to emissions from the operation of the coal-fired power stations, Northern and Playford.[14] In another example, coal dust emissions in the NSW Hunter Valley were identified as leading to the toxic inhalation of nitrous oxide by a truck driver and residents in the Hunter Valley report significant instances of *"asthma, coughs and skin disorders among local children"*.[15]

A recent report from the Climate and Health Alliance (CAHA) and The Climate Institute (TCI) identified that the benefit from each tonne of carbon reduction equates to a saving of $46 in health costs – twice value of Australia's starting price for carbon[16] and also above the price of renewable energy certificates. As noted in this report "coal fired power in Australia burdens the community with a human health cost estimated at $2.6 billion annually".



[17]

The CAHA/TCI report makes clear that the earlier emissions reduction strategies are implemented, the greater the human health benefits. That is, cumulative savings and health gains will be greater if action begins now. Analogous with the work of Professor Garnaut and Sir Nicholas Stern, clearly early action drives greater cumulative benefits later. However, in relation to health, those benefits have immediate and positive impacts for the health of the community.

While we acknowledge that no energy generation technology is benign, the impacts of fossil fuels are well understood but the economic benefit from cleaner energy is only beginning to be understood. Pacific Hydro believes that the Climate Change Authority should consider the benefits to health from ensuring that the RET delivers in the context of this Review.

In our view it would be beneficial to broaden the understanding of the health benefits delivered by reducing emissions. In this context, we recommend that the Climate Change Authority commission a broad study into the health benefits from lowering emissions; quantifying mortality and disease benefits for the health sector and the community delivered by climate policy measures and actions such as the Renewable Energy Target.

[12] CAHA/TCI. 2012. "Our uncashed dividend" http://www.climateinstitute.org.au/verve/_resources/OurUncashedDividend_CAHAandTCI_August2012.pdf p. 12.
[13] Markandya. A.The Lancet. Public health benefits of strategies to reduce greenhouse-gas emissions: low-carbon electricity generation. Volume 374, Issue 9706, Pages 2006 - 2015, 12 December 2009. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)61715-3/fulltext#article_upsell
[14] http://dea.org.au/images/general/Post_Augusta_health_studies.pdf
[15] ABC Four Corners (2010). A Dirty Business. Reporter Andrew Fowler, broadcast on 12 April, 2010.
[16] CAHA/TCI. 2012. "Our uncashed dividend" http://www.climateinstitute.org.au/verve/_resources/OurUncashedDividend_CAHAandTCI_August2012.pdf p. 12.
[17] Ibid. p. 8

2. Section 2: Policy rationale underpinning the target

The RET is a market mechanism and is intended to accelerate the deployment of renewables into the energy system so as to enable an orderly and economically efficient transition to a low carbon energy supply.

Increasing the level of renewable energy is prudent risk management to mitigate against rising gas and coal prices as well as from climate change impacts.

In Australia, as with other nations, encouraging and supporting this trend is empowered through a clear, long term framework that drives the most efficient clean technologies to be deployed.

2.1 The Renewable Energy Target in context

While some analysts predict that there is a risk to the large scale target being achieved, the renewable energy industry has historically consistently met or exceeded national targets. Unlike many other renewable energy policies, the RET is remarkable for its success rate, not failure.

Pacific Hydro believes that the existing absolute targets under the RET should not be altered or tied to constantly fluctuating (unpredictable) demand, nor should the RET be divided into technology bands. Either move could invite ongoing changes, undermine investment, add costs to consumers and put back by decades our opportunity to transition to clean energy in an orderly and certain regulatory environment.

Analysis from SKM for the CEC predicts that based on the current RET design to 2020:

- coal fired generation is expected to be lower as a result of the additional renewable generation, resulting in a fall in total generation from coal over the period.
- gas fired generation will be lower as a result of the RET, but there is still a small rise in overall generation from gas over this period.
- minor deferment of new fossil fuel generation capacity over the next 10 years, but this may also be impacted by the lower demand growth now being forecast.

Demonstrated experience in South Australia shows that wind generation – which now provides more than 20 per cent of energy needs in that state – can be incorporated into Australia's energy supply system.[18] South Australia's deployment of renewable energy driven by the RET shows that the industry is getting to mainstream levels, and doing so through an orderly transition to lower emissions, strong investment in regional areas and downward pressure on wholesale prices.[19]

2.2 Evaluation criteria in context of the Renewable Energy Target Review

In the below discussion, each of the seven evaluation criteria is discussed in the context of the scope of the Review.

In our assessment, considered against these criteria (economic efficiency, environmental effectiveness, equity, public interest, consumer price impacts, global climate change mitigation efforts, foreign policy and trade objectives), the Renewable Energy Target as it is currently legislated supports or strengthens each and every principle.

Our view is clear and unapologetic about the fact that if major changes were to be made, a number of these principles would be perversely if not detrimentally affected.

From our perspective, however, there are some minor adjustments that the Authority could make which would *further strengthen* certainty and integrity of the RET against these criteria.

[18] AEMO. 2012. Historical Market Information – South Australia. http://www.aemo.com.au/en/Gas/Planning/South-Australian-Advisory-Functions/~/media/Files/Other/planning/SA_Historical_Market_Information_2012.ashx
[19] Analysis provided by the Clean Energy Council from a forthcoming report.

2.2.1 Economic efficiency

Economic efficiency is supported through the RET's present design, which provides clear signals to the market to facilitate investment in long-lived assets, with 12-15 year financing arrangements. The outcomes to date have seen the most efficient technology options deployed through a competitive market while cost impacts on consumers have remained low.[20]

The Grattan Institute previously identified the RET was the most efficient policy measure implemented in Australia to date in terms of cost per tonne of abatement delivered. The report also acknowledged that the RET had delivered the most in terms of actual abatement compared to other schemes and programs.[21]

While economy-wide carbon trading is a more efficient mechanism, most analysis shows that it will be some time before the carbon mechanism delivers a "transformational" carbon price for Australia's stationary energy sector.

As such, for economic and environmental reasons, there remains good reason to continue to support the fast deployment of renewable energy. Primarily this is because investment in RET projects now will yield lower overall costs of abatement in the long term. The RET encourages market driven competitive pressure to drive technologies down their cost curves.[22]

Economic efficiency of investment, not to mention sovereign risk, will be significantly affected if significant changes are made to the RET target, or its design parameters.

It is also important to note that the penalty price for non-compliance under the RET is not subject to CPI adjustment meaning it is fixed for the term of the legislation. This acts as a natural incentive for renewable energy deployment to maintain a downward trend in cost of delivery in real terms. If history is any guide, the tax effective penalty price has never been reached and given the RET establishes a highly competitive market for renewable energy it would only be reached if there was a material change in forward energy price projections.

2.2.2 Environmental effectiveness (environmental integrity)

The RET is projected to reduce emissions by around 380 Mt in the period to 2020[23] in support of national and international goals to reduce emissions and accord with ambitions to ensure that global climate change does not reach 'dangerous' levels.

The RET, as it is currently legislated, provides Australia with its best opportunity to continue the transition to clean energy that has started through the first ten years of its operation.

In the context of recent policy changes including international carbon market links, the removal of the price floor, and the decision not to pursue 'contracts for closure' of 2000 MW, the delivery of domestic abatement through the RET becomes even more important in terms of the overall environmental integrity of Australia's carbon reduction measures.

We can already see evidence of the positive effect the RET is having on re-shaping energy supply by the recent closure of the Playford and Northern thermal power stations in South Australia. With the confluence of moderating demand and increased generation from wind energy the market has effectively delivered what contracts for closure program was designed to do. That is to gradually close down the oldest and least efficient thermal plant. The RET, if left in its current state, is likely to continue to play this critical role of affecting an orderly transition.

It can be further argued that the RET, as a market based solution, will deliver this transition in a far more economically efficient way and without the need for government to use consolidated revenue which can be diverted into other important government spending needs such as education or health.

[20] Shadow Minister for Climate Action, Environment and Heritage Greg Hunt said on 23 August 2012 in an interview on ABC 7.30 that "the NSW independent regulator found in the case of NSW out of an 18 per cent price rise…the renewable energy target is 0.3 per cent. So that's 1/60th of the total rise."
[21] Grattan Institute. 2011. 'Learning the Hard Way: Australia's policies to reduce emissions' pp. 9-12
[22] Previous modelling from McLennan Magasanik Associates confirmed that a lower overall cost of abatement is achievable with the combination of emissions trading and the renewable energy target.
[23] Analysis provided by the Clean Energy Council from a forthcoming report.

The Renewable Energy Target legislation drives local investment and local abatement. It is does not allow overseas sourced 'clean energy' to enter into the scheme (despite calls from some investors with overseas project opportunities for inclusion of 'offshore' generation). In our view, the domestic environmental integrity that is contained in the RET legislation is a key aspect that should be strengthened by increasing the level of transparency over penalty prices.

In our view, the domestic environmental integrity that is contained in the RET legislation is a key aspect that should be strengthened by increasing the level of transparency over penalty-prices. As it stands, currently, retailers choosing to pay the penalty instead of purchasing renewable energy generation from a power producer face no penalty, even if that energy (or project) is available. As such, there is a risk in the legislation that retailers *could* be incentivised to game the market to their benefit without any public reporting requirement which would help to mitigate such a risk. Under the UK Renewables Obligation scheme, this risk is addressed by requiring annual public reporting on the amount of penalties paid and the amount of renewable generation actually purchased. A full explanation of how this works is included at **Appendix A**.

Pacific Hydro believes that in addition to ensuring the target remains at 45,000 GWh, it will be important to increase the level of transparent reporting with regard to retailers which elect to pay the penalty price in lieu of contracting for renewable energy.

2.2.3 Equity

In our view equity needs to be considered from a number of high-level aspects: sectoral equity, investor equity and fairness, future generational equity, and international equity.

a. Sectoral equity

The electricity sector is by far the largest contributor to emissions and needs to do more to reduce emissions to ensure reductions occur.

b. Investor equity

Investment decisions have been made on the basis of the legislated target to deliver 45,000 GWh of renewable energy in 2020.

With some $20-25 billion to be invested, major change would risk at least 50 per cent of this planned investment, with estimates that around $10 billion would be jettisoned from regional Australia with those communities and the environment losing out significantly.

While we strongly believe that the RET target should not be adjusted in the context of this review, the level of certainty provided by the RET target could be further strengthened by incorporating a mechanism which would only allow adjustment upwards by Ministerial directive.[24] This would also provide future decision-makers a pathway to manage concerns about CEFC (or other) funding affecting the RET market. In our view, the Authority has an opportunity to recommend such a minor change to ensure (and assure) certainty and protect investors, while ensuring integrity of the original target is maintained.

Pacific Hydro would endorse a similar measure being included in the RET scheme – particularly in relation to managing impacts later in the decade from CEFC funded projects – and allowing this to occur as a matter of process, rather than legislative review.

c. Inter-generational equity

With the LRET being delivered through essentially stable or falling cost impacts to consumers (in percentage terms), equity issues are well addressed given the significant benefit to delivered through emissions abatement, jobs, investment and the additional security of a diversified energy generation base.

As many reports acknowledge, the price of natural gas is rising towards international parity and coal costs are rising due to global demand and environmental factors. In this context, increased renewable energy generation effectively provides a prudent hedge against the increasing cost of

[24] Such an approach was taken in relation to the Victorian Renewable Energy Target scheme where the Governor-in-Council was able to fix an *increased* amount of electricity from eligible renewable energy sources in respect of a year.

fossil fuels. Conversely, renewable energy technology costs are declining and wind and solar PV expected to be competing with fossil fuel alternatives by 2030.[25]

d. International equity

Australia ranks in the top 20 polluting nations globally alongside many of our key economic and political allies such as the United Kingdom, Canada, New Zealand and Japan. This also means there are approximately 180 nations that are less polluting than us.

Australia's renewable energy target and our international commitment to cut Australia's emissions by 5% by 2020, demonstrate that we are playing our part in addressing the global challenge to reduce emissions. The RET is projected to reduce emissions by around 380 Mt in the period to 2020[26] in support of our emissions reduction ambitions and to ensure an orderly longer term transition to zero carbon energy.

The transition to clean energy that is being driven by the RET fundamentally aligns with the national carbon reduction policy goals and with global ambitions to ensure that we burn far less fossil fuels by 2020 than we do now.

In our view, as long as its 'investment grade policy' status is reinforced through this review, the RET will continue to play its key role in delivering on the stated policy of the Government and the Coalition.

2.2.4 Public interest

As noted under **1.2.3** in this submission, public health benefits from reducing emissions in the energy sector are significant and clearly in the public interest.

Policy makers have also long agreed that long-term renewable energy technology development an innovation is in Australia's public interest as development of a suite of technologies that reduce emissions and provide secure energy is clearly beneficial. As noted by the ARENA Chair, Greg Bourne, *emerging* renewable technologies need to have a clear path to market in order for the support structures and research to deliver.

In our view, a clear strength of the RET is that its stability and longevity provide a clear goal for those technologies which are moving closer to commercial scale (eg. solar thermal, solar PV and conventional geothermal). To remove or significantly modify the RET risks reducing incentives across the innovation chain, creating further drivers for Australian innovation to chase offshore markets and opportunities.

2.2.5 Takes account of the impact on households, business, workers and communities

Renewable energy is demonstrably cost effective in the context of Australia's energy transformation. The large scale RET is both necessary and complementary to the carbon mechanism in the context of adjusting our energy supply system towards low and zero carbon sources. That adjustment is being seen in practice in South Australia and will emerge in other states as the target is delivered through projects deployed this decade.

a. Household and small business electricity price effects

Network charges are the single largest component at around 51 per cent and are clearly the biggest driver of retail price increases across Australia. As acknowledged by the Australian Energy Market Commission in its recent Power of Choice Review, there are potentially significant savings to be achieved through energy market reform focussed on networks.

Retail electricity prices do incorporate the Renewable Energy Target, however as noted in the recent Department of Resources Energy and Tourism fact sheet on electricity prices the RET comprised under 3 per cent of household electricity prices nationally in 2012-13.

While there *have* been inefficient costs associated with the small scale component of the RET, these effects have been temporary and the scheme impact overall remains limited. In any case,

[25] See figures in Bureau of Resource and Energy Economics. 2012. 'Australian Energy Technology Assessment'.
[26] Analysis provided by the Clean Energy Council from a forthcoming report.

the industry predicts that overall scheme costs will likely fall to around $60 a year per household in 2020, or around 90 cents a week.[27]

As the Climate Change Authority also acknowledged in the issues paper, costs associated with the RET decline over time due to the structure of the fixed price penalty and the interaction with the carbon price.

Analysis continues to show that the LRET is bringing forward the lowest cost renewable energy technologies and is driving down costs through competitive pressure in the market as the annual targets increase. This essentially allows for a stable, or falling, cost impact to consumers in percentage terms.

Analysis prepared for the Clean Energy Council indicates that:

- retail prices have decreased slightly as a result of the RET.
- looking forward, the analysis projects that the wholesale price is likely to reduce across the NEM.
  - The projected reduction in wholesale prices will partially offset the compliance cost of the scheme assuming the cost reduction in wholesale price are passed through to customers (which should be the case in a competitive retail market). This is particularly the case for energy intensive trade exposed customers who pay a lower compliance cost and may see reduced overall costs if the wholesale cost reductions are passed through.
- the (already small) contribution from the RET impact on retail bills are expected to fall over time in percentage terms.

In our view, if the target is adjusted to a lower and differently expressed target, or split into technology bands, it will invite ongoing calls for change, undermine investment and raise costs for energy users through ongoing uncertainty as well as increased costs due to increased gas or coal fired generation.

b. Workers, allied industries and communities

Retaining the legislated target and the scheme design around least cost technology drives clear benefit to households, businesses, workers and communities. As noted elsewhere in this submission, regional communities and businesses stand to gain significantly from some $20-25 billion being injected to deliver on the RET target. The RET's objectives strongly complement other policy objectives to provide strong and clear signals for private capital combining with the market and technology experience to build a skilled, growing workforce.

One of the primary drivers of the renewable energy policy is to build clean energy industry capacity and create new job opportunities.

The Climate Institute estimated that well over 30,000 new jobs will be created in the clean energy sector out to 2030 based on the delivery of the existing legislated target of 45,000 GWh.[28] The clean energy industry will play an important regional employment role into the future as the majority of large scale renewable energy projects will be built in regional areas.

Renewable energy project developments provide economic benefits such as diversifying the income base of the agricultural sector in the region and providing significant jobs and contracting opportunities during the average two year construction for each project. Indirect benefits are also realised by local business throughout construction and operation. Once operating, we also dedicate a portion of revenue to sponsor local community organisations through our Sustainable Communities Fund.

On allied industries, Pacific Hydro notes that the wind industry has – thus far – been able to encourage local tower fabrication in Victoria and South Australia. As an industry in which steel, concrete and rock are the core components in construction, alongside the technology itself, we urge the CCA to carefully consider the impacts on manufacturing businesses who have also invested on the basis of the current target.

[27] Clean Energy Council, 2012. Submission to the Renewable Energy Target Issues Paper.
[28] TCI. 2011. Clean Energy Jobs in Regional Australia. http://www.climateinstitute.org.au/clean-energy-jobs.html/section/479

2.2.6 Supports the development of an effective global response to climate change

Australia has committed to reducing emissions at a national level under a number of international frameworks. We ratified the Kyoto Protocol, underscoring our commitment to hold emissions to an 8% rise on 1990 levels by 2012 and are now committed to reducing emissions by *at least* 5% by 2020 compared to 2000 levels.

More than 70 nations have a legislated renewable energy target, putting Australia's target alongside (not ahead of) many of our trading partners. As noted by the International Energy Agency, providing incentives to deployment for renewable technologies "reduces costs in the longer term and makes renewable energy affordable when it needs to be deployed on a very large scale to fully contribute to climate change mitigation and energy security".[29]

Global investment in renewables has also outpaced investment in fossil fuels for the past three years and is expected to do so this year *because* of the clear desire by nations, people and investors to ensure that clean energy is deployed to meet energy needs and emissions reduction goals.

Continued investment levels over the next five years, at the same compound rates as we have seen, will mean that at a global level, we will have "broken the back of emissions growth".[30] That is the outcome envisaged by our policy commitments on climate change, carbon reduction and renewable energy – transitioning to clean energy and reducing emissions.

2.2.7 Consistency with Australia's foreign policy and trade objectives.

The APEC Vladivostok Declaration of 8- 9 September 2012, confirmed Australia's commitment, along with all APEC nations, to "demonstrate[s] our commitment to pursuing green growth objectives, addressing climate change and securing sustainable economic development, and…APEC's leadership role in this regard." The APEC declaration is the latest example many similar agreements and statements where trade and foreign policy make clear reference to climate change and sustainability goals at a global level.

In support of this principle being enhanced, Pacific Hydro considers that significant changes, particularly a reduction to the RET, would exacerbate and encourage attacks on renewable energy to continue and damage our international reputation as a well-regarded and "stable" investment environment.

3. Section 3: Other matters

A number of other issues regarding energy market reform and the delivery of the RET are raised in the context of the interaction between the RET, other renewable technology funding bodies and with broader energy market policy structures. State based planning issues are a further area of 'cross-over' which the Climate Change Authority may want to explore in the context of this Review.

3.1 Renewable Energy Target and the Clean Energy Finance Corporation

Australia's national goal to deploy renewable energy in Australia is key to driving the longer term transition away from fossil fuel generation and investment. This is fundamentally driven by the Renewable Energy Target and also supported through funding support for earlier stage development projects through the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation.

While the CEFC can play a facilitation role to minimise the current gaps in renewable energy projects which face a range of commercial and market barriers, it was only formally established and legislated in 2012 and is unlikely to begin financing projects until mid-late 2013 (at the earliest). As such, we do not believe that now is the right time to consider its *potential* impact on the RET.

[29] Multiple relevant IEA reports are linked here: http://www.iea.org/press/pressdetail.asp?PRESS_REL_ID=428
[30] December 2011. Bloomberg New Energy Finance media release 'Clean energy attracts its trillionth dollar'. 6 December 2011

As discussed under **2.2.3 (b)**, a pathway to manage concerns about CEFC (or other) funding affecting the RET market approach would be to add the capacity for the target to be adjusted upwards by a Ministerial directive. This would ensure that potential CEFC (or other technology fund related) distortions are minimised without recourse to reviews of the legislation.

In any case, as noted in our submission to the CEFC Expert Review Panel,[31] a potentially better way to minimise the impact on the RET from the CEFC's funds would be to focus on grid and infrastructure investment as this would benefit a diverse range of renewable technologies and potentially address the challenges being raised through planning policy changes as outlined below.

3.2 State-based planning policy frameworks

Several state governments have introduced, or are considering the introduction of, restrictive planning regimes aimed particularly at wind developments. While projects which have already received approval will still be built, getting approval to build new projects is increasingly challenging.

With the policy intent for RET to be met at the lowest cost, restrictive (and non-evidence based) planning regimes[32] run the risk of driving up the cost to deliver the RET and flowing through to higher electricity bills.

Further, with the best renewable resources and electricity infrastructure usually near to (regional) population centres, restrictive regimes will tend to push developers to more remote locations or to sub-optimal plant design. This may lead to projects becoming more expensive and it may become cheaper for businesses to pay the penalty rate than invest in renewable energy generation. As noted at **2.2.2**, we recommend that additional requirements for transparent reporting could be added to strengthen the existing RET framework.

As noted above, directing the CEFC towards grid and infrastructure investment could mitigate some of the planning policy challenges which will tend to push developers to more remote locations with limited grid capacity.

3.3 Energy policy

There is, at present, a divergence in the constitution of energy market investment signals and "external policies" to deliver on climate change and emissions reduction outcomes.[33] Numerous studies[34] have made it clear that increasing climatic change will impact upon critical infrastructure and without adaptation in policy, adaptation in practice will not occur in sufficient time.

In order to establish the next necessary step in the reform process, to 'close the loop' in delivering a clean energy supply system, we believe a fundamental adjustment to the market objectives in the National Electricity Law is required.

3.3.1 National Electricity Objective

While there are a range of changes occurring in the energy market at present and a number of market focussed reviews underway, in our view energy market reform is most appropriately pursued through the energy portfolio. However, we do believe that it is within the remit of the Authority to make comment regarding the need for alignment of climate and energy policy objectives in the context of the RET Review.

As acknowledged in discussions with the Climate Change Authority in advance of this submission, climate change policy is now fundamentally linked to the energy market via the Renewable Energy

[31] http://www.cefcexpertreview.gov.au/content/consultation/submissions/downloads/Pacific_Hydro.pdf
[32] While we accept that all forms of energy generation will have an impact on the surrounding environment, numerous studies have been undertaken by Australian health authorities who have weighed the evidence and concluded that there is no verifiable evidence of direct links between wind farms and claimed health impacts.
[33] Such as the report to the Department of Climate Change and Energy Efficiency which noted: *"The regulatory objectives underlying the NEM, **could constitute an obstacle to effective adaptation of the regulatory framework** for the supply of electricity to climate change...Based on the current regulatory objectives, the extent to which climate change can be taken into account in decisions relating to investment in network infrastructure and demand management under the regulatory framework will depend upon whether a link between climate change and security and reliability of supply can be clearly established."*
[34] See for example, reports from the IPCC (2007, 2011), Sir Nicholas Stern (2007) and Professor Ross Garnaut (2008, 2011).

Target *and* the Clean Energy Future legislation. However, the National Electricity Objective (NEO) as yet does not acknowledge the environment within the objective, to ensure ecologically *sustainable* delivery of energy to society.

Pacific Hydro has made the case consistently that there is a clear need to include a climate change policy reference in the national energy market objective.

Precisely *because* the NEO does not have clear reference to the need to reduce emissions from the energy sector, the AEMC, and other market institutions, continue to fail to recognise that transforming our energy generation will *necessarily* impact other parts of the market (such as demand side responses, transmission investment etc).

It is clear to see that the RET is driving an orderly transition in the system. That this is beginning to delay the need for new (especially) large, fossil fuel base-load generation, shows that the RET is beginning to prove successful. South Australia provides a clear indication of the likely impact at a national level and demonstrates that the RET, in concert with the carbon price, is likely to drive the same outcome as 'contracts for closure'.

3.3.2 Grid capacity and connection barriers to project development

The Australian Energy Market Operator recently stressed the imperative of *meeting* the renewable energy target, interpreting this as consistent with the National Electricity Objective's emphasis on the "long term interests of consumers".

AEMO recognises that efficient and well planned network investment is key to ensuring that the RET is met at the lowest cost, noting earlier in 2012 that "wind will be a leading source of renewable energy in the next decade and generation from different regions must be supported by efficient network development to meet renewable energy targets at the lowest cost".[35]

The presently limited mechanisms available to develop new transmission in remote areas will, in our view, continue to impede investment. The current structures, if not addressed, are likely to drive renewable energy investors into areas with lower value resources with the possible outcome that the best (highest value and largest capacity) resources may not be deployed for many decades to come.

Well targeted grid augmentation could have a dramatic impact on the development of emerging renewable resources such as solar and geothermal. For example, grid infrastructure in the mid-north of South Australia would greatly facilitate development opportunities for base-load generation from geothermal power. Further, grid augmentation west of the existing grid infrastructure along the eastern states, from Queensland to Victoria, would similarly facilitate connection of large amounts of utility scale solar PV and solar thermal power.

The funding of shared grid infrastructure would benefit multiple projects and technologies and defray the risk of specific project funding leading to short term price effects in the renewable energy market.

4. Summary of Recommendations to the Climate Change Authority

Legislative matters

- Make no changes to the Renewable Energy Target legislation except for the removal of the legislative requirement for biennial reviews;
- Make no adjustment to the existing legislated target for **at least** 45,000 GWh of renewable energy by 2020 with 41,000 GWh from large scale generation;
  - Beyond this review, we believe that the Authority (and the relevant Minister) should consult with the industry and investors directly especially with regard to longer term investment matters and market development towards the end of this decade, consistent with the practice in the broader energy market via electricity market institutions.

[35] AEMO Stakeholder Newsletter March 2012. http://www.aemo.com.au/corporate/0000-0377.pdf p.3

- Make clear that future changes to the target would be upwards and by Ministerial directive, not legislative review, in response to certain conditions eg. CEFC or other funding affects, longer term policy goals; and
- Increase the level of transparent reporting with regard to retailers which elect to pay the penalty price in lieu of contracting for renewable energy.

Investment effects

- Recognise that material changes to the target will affect existing and future value in the market and perversely damage our reputation as a stable investment environment;
- In the context of investor certainty, carefully consider the potential impacts on Australian superannuants' retirement savings from any major adjustment to the target;
- In the context of broader economic effects, carefully consider the impacts on manufacturing businesses that have made investments on the basis of the current target; and
- Recognise that the transition to clean energy that is being driven by the RET fundamentally aligns with the national carbon reduction policy goals and with global ambitions to ensure that we burn far less fossil fuels by 2020 than we do now.

Related policy matters

- Commission a broad study into the health benefits from lowering emissions; quantifying mortality and disease benefits for the health sector and the community delivered by climate policy measures and actions such as the Renewable Energy Target;
- Recognise that restrictive state-planning policy frameworks may push development to more remote locations and/or sub-optimal plant design; and
  - Acknowledge that directing clean energy funding towards grid and infrastructure investment could reduce potential effects on the RET and (in parallel) reduce state planning related risks.
- Acknowledge that energy market reform is most appropriately pursued through the energy portfolio but, within the remit of the Authority, make comment regarding the need for alignment of climate and energy policy objectives in the context of the RET Review and broader national and international policy commitments to reduce emissions.

APPENDIX A

Disclosure under the UK Renewables Obligation scheme

Part 10 of the Australia's RET legislation (s.105) requires an annual report to be prepared by ORER and presented to parliament, but it deals with obligations and compliance in aggregate rather than stating who had what obligation, whether they met it and if so by what means.

In contrast, the UK Renewables Obligation scheme requires liable parties to report on the actual renewable generation acquired for their liability versus penalties paid. [36]

Extracted sections are set out below:

The Renewables Obligation Order 2009

*Made*** 2009 Coming into force 1st April 2009*

…

Functions of the Authority

57.—(1) In addition to the functions assigned to it elsewhere in this Order, the Authority shall have the following specific functions—

(f) by the 1st April each year publishing a report in relation to the obligation period ending on the 31st March in the previous calendar year ("the relevant period"), such report to include details (or, in the case of paragraph (ix), a summary) of—

(i) the compliance of each designated electricity supplier with its renewables obligation, for the relevant period, including the extent to which that obligation was met by the production of renewables obligation certificates under article 5(2), payments made under article 43 or the production of Northern Ireland certificates under article 13(1), or was treated as met by payments made under article 44;

(ii) the sums received by each United Kingdom supplier under article 47 in relation to the relevant period;

(iii) the number of ROCs issued by the Authority, the number of ROCs accepted by it under article 5(2), and the number of ROCs issued by it but not yet deleted from the Register in relation to the relevant period;

(iv) the number of ROCs issued by the Authority in relation to the relevant period categorized by reference to the way in which the electricity in respect of which the ROCs were issued was generated;

(v) any notices published by the Authority under article 49(2) in relation to the relevant period;

(vi) any payments made to the Authority in accordance with article 49(5), during or in relation to the relevant period;

(vii) the sums received by each compliant United Kingdom supplier under article 52, during or in relation to the relevant period;

(viii) any recalculations carried out by the Authority in accordance with article 50(5), during or in relation to the relevant period;

(ix) the outcome of any enquiries or investigations conducted by the Authority pursuant to sub-paragraph (g) in relation to the relevant period; and

(x) any other matters which the Authority considers relevant in relation to the relevant period;

EXPLANATORY NOTE

(This note is not part of the Order)

This Order imposes an obligation ("the renewables obligation") on all electricity suppliers, licensed under the Electricity Act 1989 ("the Act") which supply electricity in England and Wales, to produce a certain number of renewables obligation certificates in respect of each megawatt hour of electricity that each supplies to customers in England and Wales during a specified period known as an obligation period (article 5). It also "bands" the different technologies that are used to generate electricity from renewable sources, meaning that the number of certificates that will be issued in respect of that electricity depends on the way in which that electricity has been generated. The renewables obligation is administered by the Gas and Electricity Markets Authority ("the Authority") who issue renewable obligation certificates to renewable electricity generators on their renewable output. These certificates are sold to electricity suppliers with or without the associated renewable electricity.

[36] The text here is from the Explanatory Note. The full text is here (one of the subsequent versions to the original legislation) and a copy of one of the OFGEM annual reports to give it some context and understand what could be included in the RET legislation.

Alternatively, instead of producing the required number of certificates in respect of all or part of their renewables obligation, a supplier is permitted to make a payment to the Authority (articles 43 and 44).

Part 1 sets out the interpretation provisions for the Order, and defines biomass and waste. In particular, article 3 specifies, as provided for in section 32M of the Act, that waste constitutes a renewable source if not more than 90% of it is, or is derived from, fossil fuel. It also sets out how the proportion of waste which is, or is derived from, fossil fuel is to be determined and includes specific provisions relating to municipal waste.

Article 4 defines biomass and also sets out the circumstances in which a fuel (not being biomass), may be treated as biomass by virtue of being used in a generating station with biomass. It also provides how the proportion of biomass which is composed of fossil fuel is to be determined.

Part 2 sets out how the renewables obligation is calculated and what a supplier needs to do to meet their obligation. In particular, articles 6 to 10 set out the calculations that the Secretary of State must undertake before the start of each obligation period (apart from the 2009/10 obligation period) to determine the total UK renewables obligation for that period.

Article 11 sets out the circumstances where each calculation is to be used to determine the total obligation for electricity suppliers in England and Wales.

Article 12 determines the number of renewables obligation certificates to be produced by individual electricity suppliers to discharge their renewables obligation. Paragraph (4) of this article requires the Secretary of State to publish by the 1st of October preceding an obligation period the number of renewables obligation certificates that a supplier will be required to produce in respect of each megawatt hour of electricity that it supplies to customers in England and Wales.

Article 13 provides for an electricity supplier to discharge its renewables obligation by the production to the Authority of a Northern Ireland certificate. This article also sets out the co-firing cap i.e. licensed suppliers are not able to meet more than a specified proportion of their obligation by presenting renewables obligation certificates issued in respect of electricity generated by a generating station fuelled or driven partly by renewable sources and partly by fossil fuel.

In Part 3, article 15 sets out those conditions that need to be met for electricity to be regarded as having been supplied to customers in Great Britain or Northern Ireland for the purposes of section 32B(3) to (6) of the Act. Article 16 sets out when electricity is to be regarded as being used in a permitted way for the purposes of section 32B(7) and (8) of the Act.

In Part 4, articles 17 to 23 set out circumstances in which ROCs are not to be issued.

In Part 5, articles 24 and 25 set out how the number of ROCs relating to a generating station's renewable output is to be calculated. Article 26 makes specific modifications for qualifying combined heat and power generating stations.

In Part 6, articles 27 to 31 are the "banding provisions", which govern the amount of electricity in respect of which each ROC is to be issued. Article 27 contains the general rule, which is that the amount of electricity in respect of which a ROC is to be issued depends upon the way in which the electricity was generated, and is set out in Part 2 of Schedule 2. There are special provisions governing ROCs issued to qualifying combined heat and power generating stations (article 28), microgenerators (article 29), generating stations which were accredited as at 11th July 2006 (article 30), and generating stations which were accredited or held preliminary accreditation as at 31st March 2009 (article 31).

Article 32 sets out conditions which must be satisfied before the "banding provisions" apply to certain generating stations in respect of which a statutory grant has been awarded. Article 33 provides for the Secretary of State to review the banding provisions at four yearly intervals, with the first review commencing in October 2010. A review may also occur at any other time if any of the circumstances set out in article 33(3) arise.

In Part 7, articles 34 to 40 provide for the issue of ROCs – that is to say, renewables obligation certificates issued under this Order – by the Authority. Article 41 provides for the revocation of ROCs in certain circumstances.

Where suppliers discharge their renewables obligation (in whole or in part) by making payments to the Authority, the payments are held in the buyout and late payment funds. Part 8 sets out how the buyout and late payment funds are to be handled. Articles 45 and 46 require the Authority to make payments from those funds into the consolidated fund and to the Northern Ireland Authority to pay for the costs of administering the renewables obligation. Once these payments have been made, the remainder of the money in the funds is paid to UK suppliers, who have discharged their renewables obligation (in whole or in part) by presenting renewables obligation certificates, in accordance with article 47. The exception to this occurs where £50,000 or less is all that is held in the late payment fund, in which case that amount will be retained by the Authority and will be paid out in the following obligation period (article 46).

Part 8 also contains "mutualisation" provisions (articles 48 to 52). These provisions deal with a situation where the amount held in the buyout and late payment funds is less than the amount that should be held

in those funds. Such a situation would only occur where a licensed supplier failed to discharge its renewables obligation by presenting certificates and/or making payments as required by the Order.

Part 9 makes provision concerning information which is to be provided to the Authority (articles 53 and 54), which is to be provided to the Secretary of State (article 55), and which is to be exchanged with the Northern Ireland Authority (article 56). It also sets out functions to be discharged by the Authority, in addition to those it is required to discharge in order to administer the renewables obligation (article 57).

Article 58 provides for the preliminary accreditation and accreditation of generating stations. In order to be eligible to claim ROCs in respect of electricity generated from eligible renewable sources, a generating station must have obtained accreditation from the Authority.

Article 60 modifies the provisions of specific articles in this Order to enable a microgenerator to be able to claim ROCs on an annual rather than a monthly basis.

Article 61 revokes the Renewables Obligation Order 2006 ("the 2006 Order") and the Renewables Obligation Order 2006 (Amendment) Order 2007. The provisions of the 2006 Order are saved in respect of all outstanding obligations or requirements imposed by it.

A full regulatory impact assessment of the effect that this Order will have on the costs of business and the voluntary sector is available from the Renewables Financial Incentives Team, Department of Energy and Climate Change, 1 Victoria Street, London SW1H 0ET and is annexed to the Explanatory Memorandum which is available alongside this Order on the OPSI website.

The 2006 Order revoked and re-enacted the Renewables Obligation Order 2005 (S.I. 2005/926) ("the 2005 Order"). The 2005 Order had revoked and re-enacted the Renewables Obligation Order 2002 (S.I. 2002/914) ("the 2002 Order"). The 2002 Order was modified by the Renewables Obligation Order 2004 (S.I. 2004/924). The 2002 Order gave effect to article 3.1 of the European Directive on the promotion of electricity produced from renewable energy sources in the internal market (Directive 2001/77/EC) (OJ L 283, 27.10.2001, p. 33). A transposition note setting out how the main elements of this Directive have been transposed into United Kingdom law is available from the Renewables Financial Incentives Team, Department of Energy and Climate Change at the above address. This Order does not raise any new transposition issues. Copies of the transposition note have been placed in the libraries of both Houses of Parliament.