

Response to the Climate Change Authority Discussion Paper on the RET Target

The REC Agents Association (RAA) made a submission to the Climate Change Authority (CCA) Issues Paper on the RET Review and has also participated in the Roundtable process that the CCA held to gather feedback on the recommendations included in its Discussion Paper.

The RAA provided feedback to the CCA as part of the Roundtable Process and we attach as Appendix 1 concerns that we have with the CCA recommendations on the Small-scale Renewable Energy Scheme (SRES).

The RAA also met with the CCA on Tuesday 13th November and is pleased to provide the following assessment of the options that the CCA is considering to deal with the uncapped nature of the SRES. We have also included an analysis of the falling level of certificate creation experienced from 1 July 2012.

Context setting – RAA membership

The REC Agents Association has a detailed understanding of the SRES, with its members working within the scheme on a daily basis.

Independent REC agents and aggregators that the RAA represents (there are around 12 businesses operating as independent agents in the REC market) account for approximately 30% of STCs created in 2012 to date. In total there have been 860 businesses that have created more than 250 STCs in the nine months to 30 September 2012. We estimate that Independent agents create STCs on behalf of more than 1500 solar energy businesses operating across Australia.

RAA members are actively involved across a range of environmental certificate markets beyond just STCs and including Victorian Energy Efficiency Certificates (VEECs), NSW Energy Efficiency Certificates (EECs) and in the emerging Carbon Farming (CFI) market. Our members have direct experience in these markets and have a long history in providing services to solar and energy efficiency businesses to manage price risk, compliance and working capital needs.

Context setting – Solar Industry position

The solar industry believes that the cost of the SRES scheme has peaked and the number of STCs being created is falling and will continue to fall from now on (particularly with removal of multiplier from 1 July 2013). The cost of the SRES is expected to be around a third the cost of the LRET scheme. This is demonstrated in some detail in this submission.

The solar industry also believes that the CCA's recommendations in the Discussion Paper dramatically change the nature of the SRES where in effect a RET review is being held every year. Ministerial discretion in setting key SRES parameters each year leads to additional uncertainty for the industry that dampens and constrains investment.

An annual review of the SRES is inconsistent with the recommendation of the CCA's Discussion Paper that reviews of the RET be undertaken every four years.

Increased Ministerial discretion around the SRES is inconsistent with a market-based approach to renewable energy.

The means of managing the cost pass through to customers is currently legislated as the Minister being able to reduce the Clearing House Price (this is viewed as not being workable and creates uncertainty). This is also the mechanism by which the support provided by the SRES is phased out over time.

It should be noted the SRES already has a mechanism for reducing the cost of the scheme - as the Clearing House Price does not increase with inflation the real cost of the SRES phases out over time. Based on an average annual inflation rate of 3% the current \$40 clearing house price is equivalent to \$23 in 2030 in today's dollars.

The solar industry believes that the best way to deal with the unlikely event of a cost blowout is to introduce a cap on the annual liability. This would replace the provisions for the Minister reducing the \$40 clearing house price.

Assessment of SRES options

The RAA has undertaken additional work on the framework to assess the merits and effectiveness of possible regimes to deal with the uncapped nature of the SRES scheme.

From our meeting on Tuesday we have developed key objectives or criteria against which the different options can be assessed. We have also made some assumptions about the apparent weighting that the CCA puts on these objectives relative to what the solar industry sees as important. Refer to Appendix 2 for a summary of the Cases and Objectives. We have included a matrix of results in Appendix 3.

We have assessed the following four options:

1. Set and Forget (Default Cap)

1 A - 1.5% Residential price Cap (reducing over time)

1 B - 10% STP Cap (reducing over time)

2. Annual Adjustment to discount

2 A - Multi Criteria (Payback, 1.5% cost and system cost)

2 B - Single Criteria (1.5% cost)

Under all of the above options it is assumed that the provisions for the Minister reducing the \$40 clearing house price are removed and the above mechanisms are the only ones used to manage the cost of the scheme.

Our conclusions are:

1. A default cap is the most effective solution, with the cap set at 1.5 percent of average residential prices and phased lower from 2021 to 2030. This is preferred to the 10 percent STP cap as it provides scope for an expansion of the annual STC target where the market price is lower (ensuring always that the cost to customers is always less than the default cap). As an example this could allow for an increase in the STC target beyond 20 million where the STC price was lower).

2. Phasing out of deeming is not supported as over time when the years remaining reduces (8 to 5 years left) - it becomes less worthwhile to create the STCs. This was the reason that the initial 5 years deeming model for solar PV was expanded to 15 years. The effect of this change will be to dramatically withdraw support for solar from 2023 onwards with the risk of a dramatically shrinking industry. The only way that this approach would work would be if the cap on the price was significantly increased from the current \$40 as the years deeming reduced.
3. A cap approach either as percent of residential retail prices or STP can be designed to phase out so that support for solar reduces to 2030. We believe that this is a much more effective option to manage the phase out than reduced deeming.
4. Concerns about solar being over supported are also addressed under a cap approach, though not as directly. Within the cap requirement the market determines volume through changes in the market price rather than the Minister determining it on an annual basis by changing the discount factor. The ability still remains within the context of the four year review to change the settings in the unlikely event that the up-front costs of PV became extremely attractive.
5. It seems that the key reason why an annual intervention type approach is seen as having more merit is where one values STC price stability. Note however that price stability can never be achieved if the Minister has the ability to reduce the \$40 Clearing House price. Under a cap approach we do not expect to see high levels of volatility in the certificate price though the price could reduce dramatically over time if solar became very attractive and a surplus of certificates developed. In this event though, experience shows us that the price would fall gradually (refer to Figure 1.)
6. The Solar industry and investors and capital providers to the industry would prefer to have predictability in the key settings as they are able to obtain price stability for themselves by entering into forward contracts.
7. The choice of options essentially comes down to whether the CCA believes that a market based mechanism is better than an annual review where the Minister has to review the market outcomes and reset key parameters.
8. The empirical evidence in Australia suggests that a market based outcome is more effective and have been much more successful than government interventions.
 - (i) Market based environmental markets have existed in the energy sector for more than 11 years. These include the operation of the REC, LGC, GEC, VEEC, ESC and NGAC markets. In these markets a cap is in place and price responds to changes in supply. These markets have all experienced dramatic changes to certificate prices at some period or other. There is a lot of experience with the workings of these markets and participants enter into forward contracts to manage price risk.
 - (ii) Schemes that are uncapped and rely on government intervention to manage settings have resulted in the boom- bust sequence that the CCA is keen to avoid - consider:
 - initial \$8000 rebate for PV that made 1 kW systems free
 - rebates for SWH that made residential heat pumps free
 - attractive feed in tariffs in most states (but particularly in Qld and NSW) that were reduced too slowly and then cut severely that created surges in activity and then a cliff face for the industry.
 - the annual race to get PV systems installed before the multiplier changes leads to an intra year artificial boom bust cycle clearly seen in the annual installation figures (refer to Figure 1).
 - All these schemes that require government intervention - or the potential of government intervention create transition issues when changes are announced. As notice is required and is provided by governments this then leads to surges in

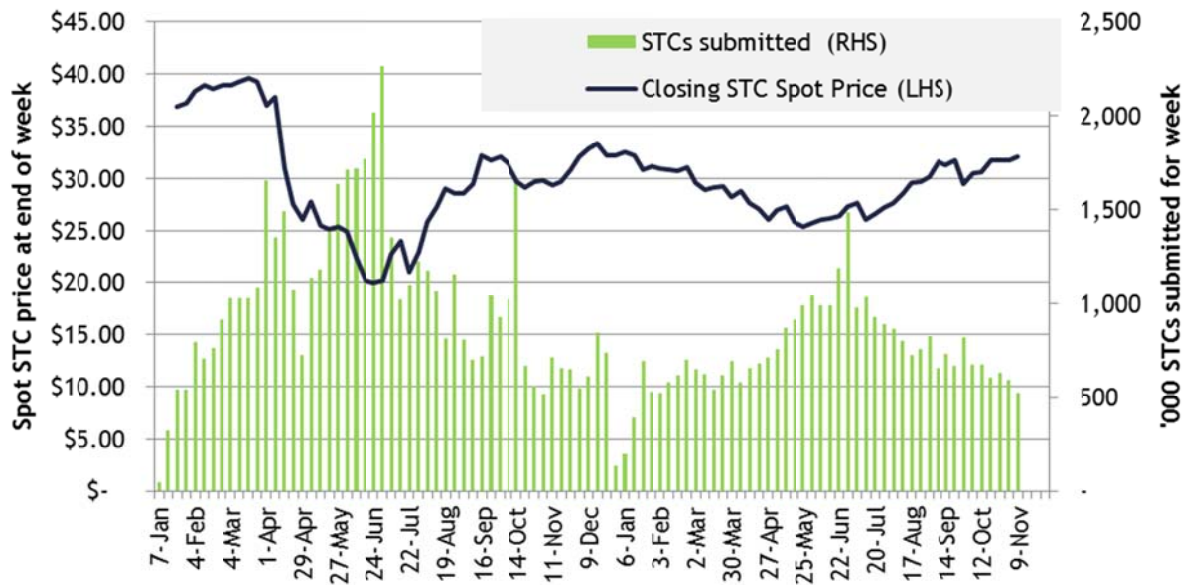
activity. These changes cannot be managed or predicted and as such cannot be contracted.

Level of STCs being created is falling and expected to continue falling

Figure 1 summarises weekly STC creation and the end of week spot STC price. The chart clearly shows a fall in the level of weekly STC creation since 1 July when the multiplier was reduced and also clearly shows the inverse relationship between the level of STC creation and certificate price.

Figure 1. Weekly STC Creation and Spot Prices

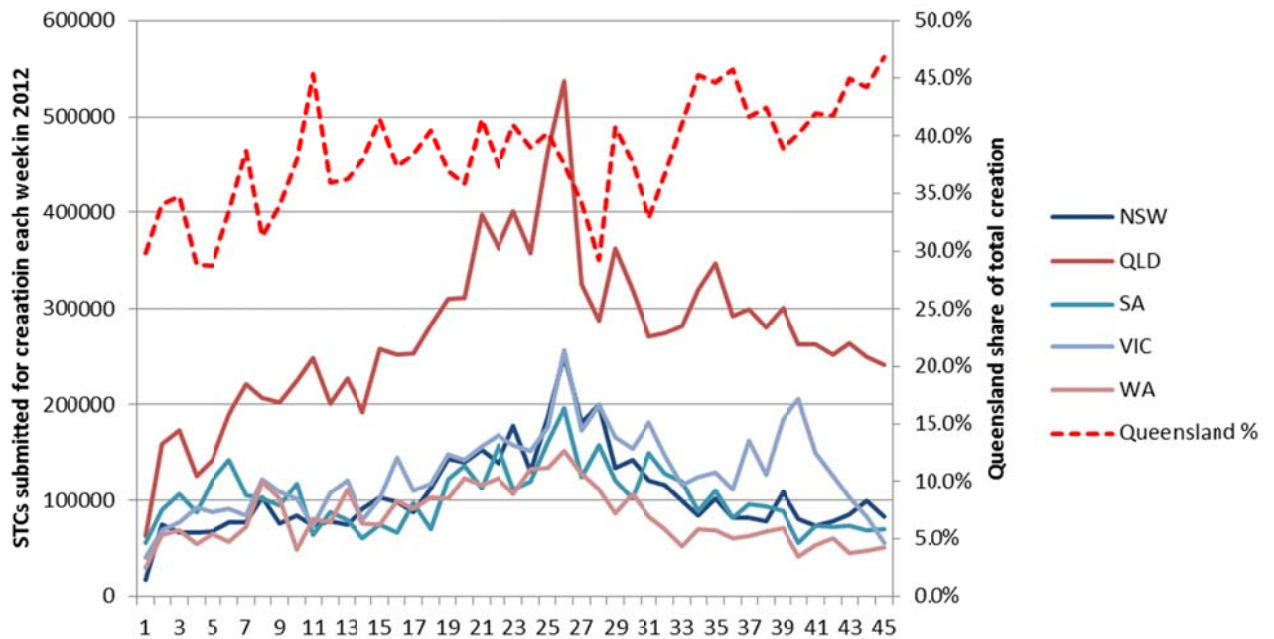
Source: Green Energy Markets



The creation figures over the last three months also include the impact of the surge in activity following the reduction in the Queensland and Victorian feed-in-tariffs. Queensland has dominated STC creation for solar PV since the start of 2012 accounting for more than 40% of PV STC creation (refer to Figure 2). The phase-out of feed-in-tariffs in Queensland saw 110,000 applications received for the attractive feed-in tariff within a two week period. The impact of these systems being installed will mean that Queensland will support overall PV installation levels in Australia (over 45% in recent weeks). PV system installations increased in Victoria as their feed-in-tariff was being phased out and in recent weeks the level of creation has dropped dramatically as this effect has worked through the market.

Figure 2. Weekly STC Creation for Solar PV by state

Source: Green Energy Markets



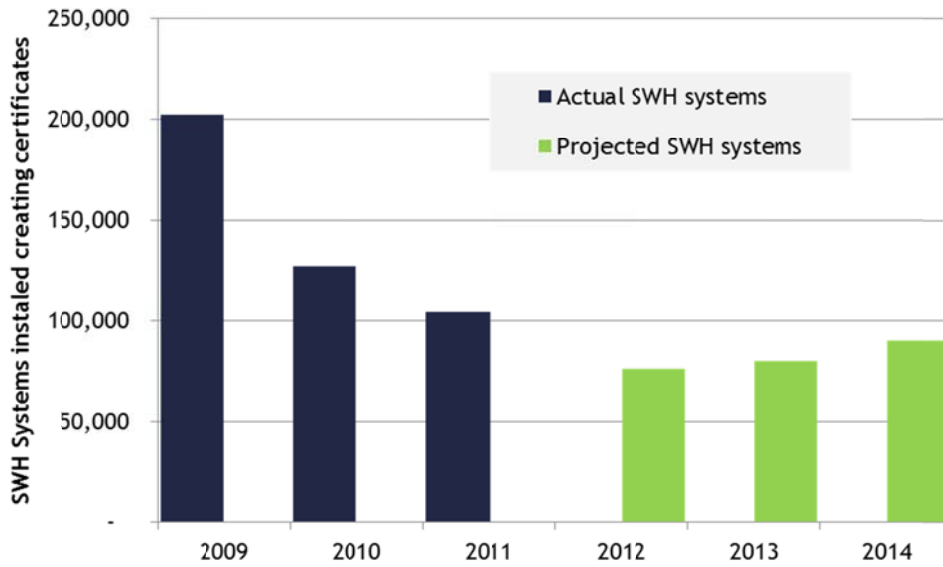
What is the future of solar PV once multiplier reduces and feed-in tariff support reduces?

Approximately 350,000 PV systems will be installed and claim STCs in each of 2011 and 2012. This level of activity has been supported by attractive solar multipliers and attractive state feed-in-tariffs. This level of annual activity represents around 7% of owner-occupied detached and semi-detached homes each year and is not sustainable. The key risk the industry faces is that it will be potentially looking into an abyss once the transition feed-in tariff impact in Queensland gets worked through next year and the multiplier reduces to 1.

The PV industry may well face the same fate as the SWH industry which was also the beneficiary of attractive additional support from state and commonwealth governments which was then removed. In the lead up to 2009 the SWH industry was installing around 70,000 to 90,000 systems per annum and this spiked to more than 200,000 systems in 2009. Since 2009 the number of systems installed has dropped dramatically (refer to Figure 3) with 2012 shaping as the lowest level for more than 5 years at around 80,000 systems.

Figure 3. SWH systems creating certificates

Source: Green Energy Markets

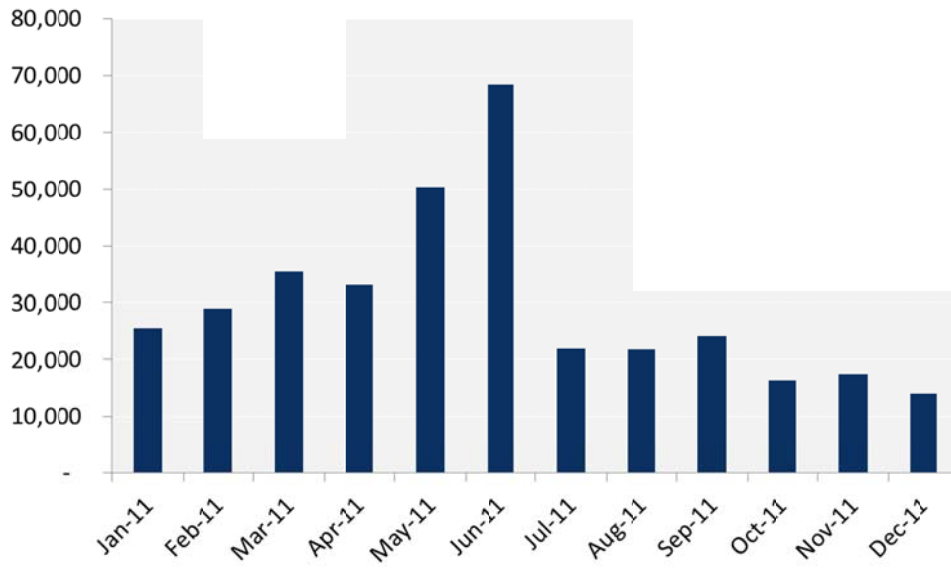


The level of PV installations fell dramatically in 2011 after the multiplier was reduced from 5 to 3 times (refer to Figure 4). The level of support received up front (as a discount to the system price) was a critically important consideration for customers.

The outlook for the second half of 2012 is a little different due to the surge in activity in Queensland and Victoria. The industry is concerned with the 2013 outlook as low feed-in-tariffs will apply in most states and the multiplier reduces to 1.

Figure 4. PV Installations by Month

Source: Clean Energy Regulator Post Code Data (October 2012)



RAA Concerns with CCA Recommendations in RET Discussion Paper

The Climate Change Authority as part of its review of the Renewable Energy Target is proposing some radical changes to the way that solar is treated under the scheme. It is proposing that solar certificates get discounted to reduce the attractiveness of solar so that homeowners and businesses do not achieve less than a 10 year payback on their system. This means that solar system owners cannot earn more than 5.5% on the installation of their solar system over a 15 year period (7.5% over a 20 year period). This is considerably less than the returns that other technologies receive.

As very few solar systems are likely to get sold on a payback of more than 10 years this will lead to a dramatic contraction of Australia's solar industry. In fact, the average hold period for a house in Australia is 9.0 years and 7.7 years for a unit (rpdata.com).

Annual review and setting of key features of the scheme

The proposal is for the Minister to review the pay-back level on systems as well as the cost pass-through to customers every year (before 1 December) and then determine a solar discount factor, reducing the solar incentive for households. This discount will be applied to systems installed from 1 July the following year. And will be applied as a "one way downward ratchet". The Minister will still be able to reduce the Clearing House price where certain criteria are met, including whether 6 million STCs are to be created in 2015.

This means that the solar industry will be waiting every year until 1 December when the Minister makes a determination on whether the number of solar certificates gets discounted or the clearing house price gets reduced (or both). They will then have until 1 July the following year to install systems before the change takes effect. This means that solar businesses and their customers get just seven months' notice of any change.

The Climate Change Authority (CCA) are concerned about cost blowouts to the scheme and their approach, which appears to have been pushed by the Australian Industry Group and others, is to discount the number of certificates. This means that the multiplier becomes less than one, and could be quite low even approaching zero. Their approach effectively means the Minister regulates the financial returns that homeowners receive from solar. In essence homeowners are not expected to receive a return of more than 5.5% (over 15 years).

The impact of this approach could be to dramatically shrink the size of the solar industry in Australia. It is expected that very few systems could be sold at less than 10 years payback (or 5.5% return). The setting of a discount factor every year will make it extremely difficult for the solar industry to have any confidence in pricing systems to customers, or investing beyond the next discount setting cycle.

CCA's proposal increases uncertainty, is unpredictable, is discriminatory and unworkable

The CCA's recommended approach fails to deliver the solar industry and its customers the sort of confidence and predictability that the CCA said was important. The CCA acknowledged that the ability of the Minister to reduce the \$40 price cap creates uncertainty and has limited flexibility to respond to changing circumstances. The CCA has not, however, recommended changing this provision and instead recommends that the Minister have further discretion to discount the number of certificates.

The CCA approach increases uncertainty and unpredictability through:

- Increased Ministerial discretion with very general criteria is a tried and tested way to ensure that investment stagnates. It is difficult to see financiers providing funding to support an industry, whose parameters are subject to change annually and with seven months' notice. This fails to give the industry the sort of predictability that it needs.
- The whole concept of annual determinations by the Minister is akin to having a review of the RET every year. The CCA strongly recommended that two year reviews just added to uncertainty and should be extended to four years. Yet its recommendation increases the frequency of reviews with key settings of the scheme reset annually. There are no more important features of the SRES than the clearing house price and the amount of the discount. Yet these will be subject to annual review.
- As the level of certificates that a solar system receives can be changed it makes it impossible for solar companies to contract beyond 30 June of any year. This means that any signal provided by the scheme can only support very short term investment. This will make it much more difficult to attract capital to the industry. It will also be impossible for businesses to plan. This becomes important where the solar purchase and installation cycle is beyond seven months as is the case with new homes and residential developments.

The CCA's proposed approach is discriminatory as:

- Solar is being discriminated against as its returns are being effectively capped at a time where other sectors receive government support and can earn more than 5.5% return. The output from solar is being discounted at a time when in fact it is providing a number of other benefits (such as contributing to a reduction in peak demand).
- Residential home-owners and small business are being discriminated against where their returns are limited to 5.5% where large solar installations under the LGC scheme can earn considerably more than 5.5%.
- The CCA in their report (page 84) state that renewable generation is renewable generation regardless of the source, however it seems that residential solar is now a less worthy renewable source.

The CCA's solar discount approach is also not workable as:

- The attractiveness and returns from solar depend on a myriad of factors including its location. Solar PV might notionally have a very short payback in some areas with lots of sunshine (ie northern Australia) but have much higher paybacks in south eastern Australia. An average payback across locations, sizes, technologies, customer types would be extraordinary difficult to predict and cumbersome to calculate.
- Solar PV and solar water heaters have different drivers and economics however the CCA has proposed applying the same discount to both. Their objective being to bring forward the most cost-effective technology. They have not however applied this objective consistently as large scale renewables would be deployed at paybacks of less than 10 years (returns of more than 5.5% over 15 years), leaving small-scale solar at paybacks of more than 10 years. This results in a sub-optimal level of renewables as less solar is being deployed where it may be more attractive than other technologies.
- Having single payback criteria also fails to consider the differences in the residential and commercial sectors. Businesses typically do not undertake energy efficiency improvements where payback is more than 3 years so it is not clear why they would invest on solar with a payback of more than 10 years.

Dramatic changes to SRES not necessary

Demand for solar PV has reduced significantly since the solar multiplier was reduced on 1 July 2012. The number of certificates being created has dropped by more than 20% in the past two months alone, and it is expected to remain low when the solar multiplier disappears in 2013. The cost of the SRES has peaked, and will continue to drop. The Review of the Renewable Energy Target needs to take this situation into account in finalising its recommendations.

Dramatically changing the parameters of the SRES as proposed by the CCA seems to be a case of “overkill” to deal with a situation that is not likely to eventuate. The CCA was concerned that the cost of the SRES could blowout to more than 1.5% of residential electricity costs. A simple approach to deal with this unlikely event would be to include “1.5% of retail electricity costs” as a cap for the Minister to consider when the STC target is set each year. This could be easily determined and would be a more predictable approach.

The RET Review needs to be very careful in considering a reduction in the size of solar systems covered by the SRES. This is the sort of proposal that has the potential to have unintended consequences for the SRES and the Large-scale Renewable Energy Target.

The RET Review also needs to be careful in recommending a change to the operation of the Clearing House to a “deficit sales facility”. Without an orderly queuing mechanism the submittal of certificates to the Clearing House when in deficit may turn out to be an ugly stampede. This may disadvantage system owners who have waited patiently for some time to receive the Clearing House price.

Managing the Cost of SRES – Objectives and Options

It is clear that the CCA is looking for options to deal with the uncapped nature of the SRES. It is recognised that all the options have issues and believe that there are basically 2 (possibly 3 approaches). These are:

1. Set and forget approach – this is essentially to include a cap on liability (this is in essence the RAA approach). This could be by way of a percent of retailer price approach or a percent STP. This would be a default cap and would only come into play where more solar systems were installed than expected.
2. Annual adjustment/review – this would entail an annual adjustment of the solar discount (less than 1) – this is essentially the CCA’s recommended position in the discussion paper

In addition to the above two approaches the CCA are also considering a “Deeming Phase Out” – under this approach the number of years deeming gets progressively reduced so that any systems installed in 2030 would only get 1 years deeming. This approach could be incorporated into either of options 1 and 2 above. The RAA has concerns with this approach as the number of deemed years reduced (5 to 8 years remaining) then this creates little incentive to create STCs – so the scheme effectively ends much sooner than expected.

It appears that in assessing a capping/phase-out mechanism the CCA has the following primary objectives:

1. Manage the cost of the STC scheme to customers to acceptable levels – what is an acceptable level ? 1.5% of retail prices was proposed in the CCA discussion paper – this is in the order of \$650 million per annum (as a comparison – when the LGC target reaches 41,000 GWh the cost at \$40 is equivalent to \$1,600 million per annum – 2.5 times higher)
2. Phase out support for solar – there is currently no end date to SRES it just keeps going after 2030 (this appears why CCA is attracted to deeming phase out)

We also believe that the CCA has the following subsidiary objectives:

3. Ensure that solar does not get over-supported – ie. it does not get more support than it needs (This begs the question as to what an appropriate level of activity / industry size) is sustainable. The CCA seems convinced on 10 years payback is sufficient – the solar industry believes that this will kill-off the industry as very few systems are sold on a payback of more than 10 years.
4. Relative stable STC prices, the CCA are concerned that if solar companies go out of business because of volatile prices then they will lobby government to change SRES settings (this concern will apply regardless of the scheme structure set)

From a Solar Industry’s perspective the key objectives would be:

5. Ensure that the Scheme design supports a sustainable level of activity that enables the industry to develop, innovate and invest to reduce costs. There will be some debate as to what this level might be with the RAA believing that this should be at least 300,000 systems (SWH and PV) equivalent to between 13 – 15 million STC target. This is the level that ensures

that a vibrant and robust industry is in place and maintains a reasonable level of employment.

6. Regime should be TLC – Transparent, Long lived and Certain - this means that the scheme should be predictable and not subject to regular review/change so as to support long term investment. Ministerial discretion in changing key parameters every year fails this objective.
7. Regime should support parties entering into contracts beyond one year in length to manage risk. To support long term investment some businesses will desire to enter into contractual supply arrangements that extend well beyond one year. This will be important where capital needs to be secured and investments committed. In addition some clients such as property and housing developers require long term commitments as it make take several years to complete a development once committed.

Assessment of SRES Options

	1	2	3	4	5	6	7	
Objectives ->	Manage Cost to Customers	Phase out of Support	Not over support	Low STC price volatility	Sustainable Industry	TLC (Predictability)	Risk Management	SUM

A. Relative Importance of objectives (ie assessment criteria)

CCA Perspective	Very High	Very High	High	High	Medium	Medium	very low
Solar Industry Perspective	Very High	Very High	High	Low	Very High	Very High	high

Grading - Level of Importance

Very High	5
High	4
Medium	3
Low	2
Very Low	1

B. Extent to which each option meets stated objective

1. Set and Forget (Default Cap)

1 A - 1.5% Residential price Cap (reducing over time)	Yes	Yes	No	Partly	Yes	Yes	Yes
1 B - 10% STP Cap (reducing over time)	Yes	Yes	No	Partly	Yes	Yes	Yes

2. Annual Adjustment to discount

2 A - Multi Criteria (Payback, 1.5% cost and system cost)	Yes	Yes	Yes	Yes	Partly	No	No
2 B - Single Criteria (1.5% cost)	Yes	Yes	No	Yes	Yes	Partly	No

Grading - Whether SRES option meets objective

Yes	3
Partly	2
No	1

C. Scoring of each Option - based on CCA and Solar Industry importance of objectives

The score for each option comprises the grading for the extent the Option meets the objective multiplied by the grading for the importance of the objective.

CCA Perspective

1. Set and Forget (Default Cap)

1 A - 1.5% Residential price Cap (reducing over time)	15	15	4	8	9	9	3	63
1 B - 10% STP Cap (reducing over time)	15	15	4	8	9	9	3	63

2. Annual Adjustment to discount

2 A - Multi Criteria (Payback, 1.5% cost and system cost)	15	15	12	12	6	3	1	64 CCA preferred
2 B - Single Criteria (1.5% cost)	15	15	4	12	9	6	1	62

Solar Industry Perspective

1. Set and Forget (Default Cap)

1 A - 1.5% Residential price Cap (reducing over time)	15	15	4	4	15	15	12	80 Industry pref.
1 B - 10% STP Cap (reducing over time)	15	15	4	4	15	15	12	80

2. Annual Adjustment to discount

2 A - Multi Criteria (Payback, 1.5% cost and system cost)	15	15	12	6	10	5	4	67
2 B - Single Criteria (1.5% cost)	15	15	4	6	15	10	4	69