Dear Sir/Madam

Renewable Energy Target Review Panel Call for Submissions

I am writing on behalf of the REC Agents Association (RAA) to respond to the call for submissions on the Review of the Renewable Energy Target (RET). RAA is a national industry body for companies that create and trade in renewable energy certificates.

This submission, and RAA's work, focuses on the Small-scale Renewable Energy Scheme (SRES), which helps Australian families and businesses install solar hot water and solar panels.

Summary of key points

- SRES is working as expected and meeting the objects of the Act.
- The solar industry has delivered – 4,000 businesses (predominantly SMEs employing 12,500 people) have invested in their business in response to bi-partisan support for the SRES - costs have fallen and in the longer term will continue to do so.
- SRES is critical for continued development of the solar industry.
- The SRES addresses some of the key barriers to the installation of solar.
- The SRES has already taken a haircut and cost is set to fall dramatically.
- The SRES leads to lower cost to all customers (when wholesale costs are taken into account).
- Rising gas prices are starting to wreak havoc on Australian families and businesses – the SRES protects us against rising power prices. Undermining the SRES protects the interests of the incumbent industry at the expense of all energy customers.
- The RET Review process is undermining the solar industry. Unpredictability and uncertainty are starting to paralyze decision making for thousands of solar businesses across the country and putting thousands of jobs at risk (sovereign risk).

RAA has undertaken extensive and detailed analysis of the SRES, and this submission draws on that analysis. Additional information can be found at www.recagents.org.au

Objects of the Renewable Energy (Electricity) Act 2000

The objects of the RET Act are:

(a) To encourage the additional generation of electricity from renewable sources; and

(b) To reduce emissions of greenhouse gases in the electricity sector; and

(c) To ensure that renewable energy sources are ecologically sustainable.

We encourage the panel to keep the "objects" as well as the principles of "ecological sustainable development" in mind when completing its review.

Additional generation

The SRES continues to meet the objects of the Act. It has certainly encouraged the additional generation of electricity from renewable sources. Indeed, it has helped transform Australia's energy system, with more than 2 million homes – 5 million Australians – installing solar panels or solar hot water systems.

Australia is experiencing the democratisation of energy. Australian households are providing competition to the incumbent energy industry and are in turn taking personal responsibility for their energy use. The Australian Government, and the RET Review Panel, should encourage competition and support the continuation of the SRES.

Reducing emissions

The RET has been the primary driver of emissions reductions in Australia, particularly in combination with the carbon price. Australia would not have met its Kyoto target under the First Commitment Period without the RET.

An analysis by SKM for the Clean Energy Council indicated that emissions are more than 22.5 Mt CO2e lower as a result of the RET.

Ecological sustainability

Renewables are ecologically sustainable by nature and provide vastly superior environmental benefits when compared to any non-renewable energy source. The Clean Energy Regulator has also proven to be a valuable and credible body to uphold all aspects of renewable energy production, management and inspection.

End-Date

The RAA and the solar industry acknowledge that the SRES in effect has a legislated end-date and will not run in perpetuity. This is reflected in the recent changes by the CCA to the SRES by reducing the deeming aspect from 2017 discussed below. The RAA is not seeking any changes - just the maintenance of the current scheme.

SRES reduces the cost of electricity

The Senate Select Committee inquiry into electricity prices showed that power prices have largely increased due to new infrastructure, not because of the carbon price or the RET. The SRES has reduced electricity demand and put downward pressure on wholesale power prices, which can offset the direct cost pass-through. [1]

The Productivity Commission undertook a review of Electricity Network Regulatory Frameworks dated April 2013 and found that spiralling network costs in most states were the main contributor to rising power prices.

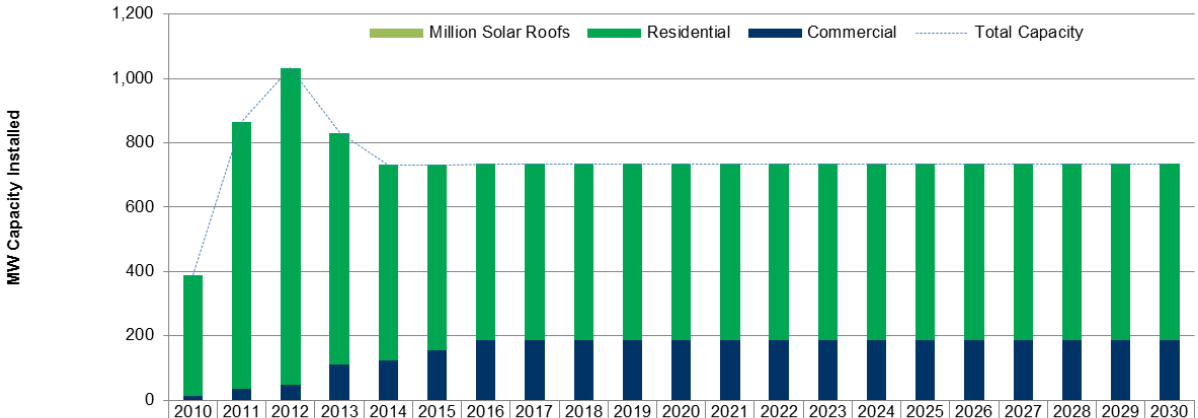
> *"Average electricity prices have risen by 70 per cent in real terms from June 2007 to December 2012. Spiralling network costs in most states are the main contributor to these increases, partly driven by inefficiencies in the industry and flaws in the regulatory environment"*

RAA has undertaken an assessment of the impact of the SRES and have used the most up-to-date assessment of the state of the solar market in Australia. This is based on the STC modelling reports prepared for the Clean Energy Regulator that supports their STC targets for 2014 to 2016. We have analysed the market into residential and commercial sectors. We assume that the installed system cost has bottomed (fourth quarter of 2013) and we expect that installed cost will rise over the next few years before starting to gradually decline.

The level of solar PV installations in 2014 is expected to be 731 MW; a 12 per cent reduction on 2013 levels. Residential solar PV installations are expected to continue to decline as increasing saturation rates are achieved. We expect that residential sales will fall 5% per annum to 2016 to 160,000 systems per annum and we expect that this level will be maintained into the future (Figure 1). The impact of reduced STC support as deeming is phased out is expected to be offset by lower installed costs. We expect that 160,000 systems per annum is sustainable over time not withstanding high saturation rates due to (i) new home construction expected to continue at current rates and (ii) increase in the number of system upgrades.

[1] See: Senate Committee Report, *Electricity Prices: Inquiry into Electricity Prices – Select Committee* (2012). See: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Former_Committees/electricityprices/electricityprices/index last accessed 15 May 2014.

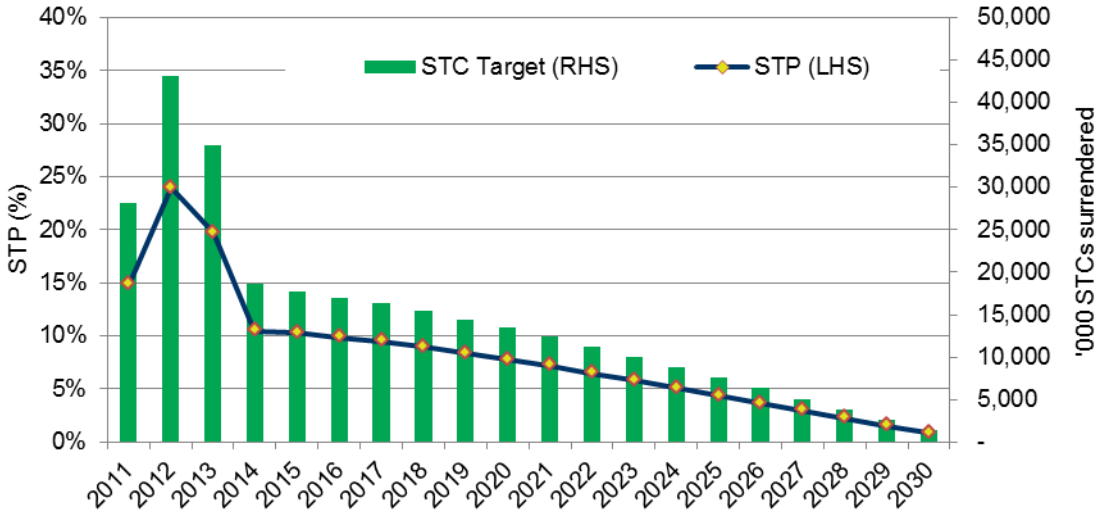
Figure 1. Solar PV installations (MW installed per annum)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Million Solar Roofs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential	376	830	986	719	608	577	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548
Commercial	13	36	47	111	124	155	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186
Total Capacity	389	866	1,03	830	731	732	734	734	734	734	734	734	734	734	734	734	734	734	734	734	734

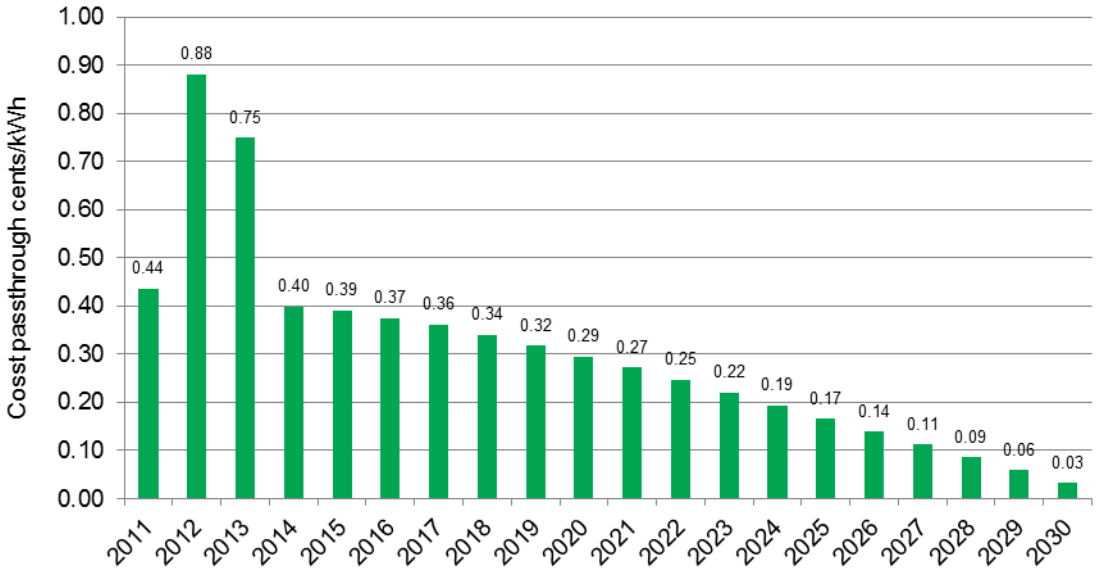
The level of STCs that will be surrendered reduces dramatically after 2017 as the deeming levels reduce (Figure 2).

Figure 2. STC Target and Small-scale Technology Percentage (STC)



The cost of the SRES which is passed through to customers by electricity retailers, significantly reduces over time (Figure 3). The cost that is expected to get pass-through in 2014 amounts to 0.40 cents per kWh which is less than half the level that got passed through in 2012.

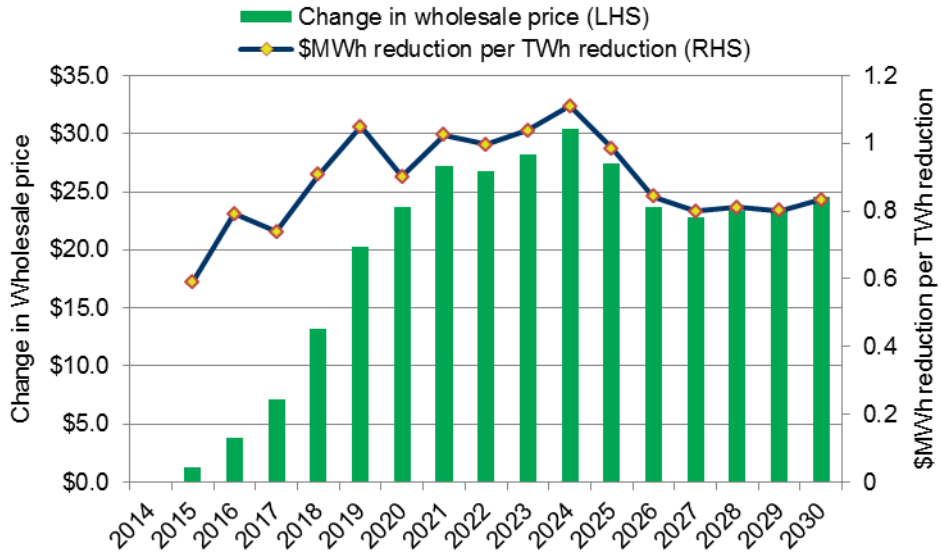
Figure 3. SRES cost pass through by Electricity Retailers to customers



The cost pass-through by electricity retailers to customers is only one part of the equation. To determine the real cost impact of the RET on customers we need to also account for the reduction in the wholesale price that is caused by the reduction in demand caused by solar. The lower electricity demand means that higher cost fossil fuel generators do not need to operate which means that the wholesale power price paid by all customers is lower.

We have used the analysis undertaken by Roam Consulting for the Clean Energy Council which modelled the reduction in the wholesale price due to the operation of the RET (Figure 4). Based on the Roam Analysis the wholesale price reduces by between $0.6/MWh to $1.10/MWH for each 1 TWh contribution of the RET (reduced demand in the case of solar).

Figure 4. Change in the wholesale price due to the RET
(Roam Consulting Analysis)



The reduction in the wholesale price due to the installation of solar systems from 2015 to 2020 amounts to an average of 0.32 cents per kWh equivalent to 1.1% of an average customer's electricity bill. The average reduction in the wholesale price over the 2015 to 2020 period amounts to 0.49 cents per kWh which means that residential customers are benefiting by 0.17 cents per kWh or just over $10 per annum.

Table 1. Cost impact of SRES on electricity bills

2015 to 2020 period (average)	Net Increase cents/kWh	Increase in bill	%of Bill
Cost pass-though	0.32	$19.14	1.10%
Reduction in wholesale price	-0.49	-$29.42	-1.70%
Net Increase (reduction)	-0.17	-$10.27	-0.59%
Average Consumption (AEMC, Dec 2013)	6,000	kWh/a (NEM)	
Average residential price (AEMC, Dec 2013)	28.89	cents/kWh in 2014/5	
	$ 1,733	Total Bill	

Beyond 2020 the net savings to customer's increases further as the cost pass-through reduces as deeming is phased out.

Over the life of the SRES, the reduction in the wholesale price more than cancels out the future cost increase that gets passed through to customers. In addition the SRES also provides the following benefits:

- The impact of the SRES in reducing energy demand is likely to have a downward price impact on network costs due to reduced pressure for additional network investments;
- Regulated transmission and distribution costs have been the biggest driver of rising power prices to date and is expected to be the major contributor to rising power prices in the future;
- Though not quantified, by reducing demand on the local electricity distribution system solar PV also reduces losses and reduces the stress on peak demand periods reducing the likelihood of customers losing power supply; and
- The reduction in demand caused by the SRES creates some protection for electricity consumers so that higher-priced gas will not necessarily equate to higher-priced electricity.

A recent report by the Centre for Energy and Environmental Markets at the University of New South Wales concluded that the increasing amount of wind energy has placed considerable downward pressure on wholesale electricity prices through the so-called merit order effect."

The UNSW report also notes that there are "likely significant redistributive transfers between different energy user classes under current RET

arrangements. In particular, some energy-intensive industries are benefiting from lower wholesale electricity prices whilst being largely exempted from contributing to the costs of the scheme. By contrast, many households are paying significant RET pass through costs whilst not necessarily benefiting from lower wholesale prices."

SRES protects families and businesses from soaring gas prices

Wholesale gas prices have risen dramatically and this is expected to continue wreaking havoc through the Australian economy. In NSW, as an example, the Independent Pricing and Regulatory Tribunal (IPART) recently approved a 17% increase in residential gas prices.

The higher gas prices have already started flowing into higher power prices. The Queensland Competition Commission has advised that energy generation costs are expected to increase by 29 per cent in 2014-15. This is driven by rising industrial demand associated with rapid development of the liquefied natural gas (LNG) export industry in Queensland and higher fuel prices (mainly gas).
http://www.qca.org.au/Electricity/Consumer/Electricity-Prices/In-Progress/Electricity-Prices-2013-14

Forward electricity prices at which market participants are contracting already reflect the impact of higher gas prices. Forward prices in Queensland and South Australia are 43 per cent higher than prices in Victoria and NSW (refer to Figure 5). Gas-fired power generation accounted for 19 per cent of generation in Queensland in 2013 and 56 per cent in South Australia. Gas-fired power generation only accounted for 3 per cent of Victoria's generation and 6 per cent of NSW's generation.

Figure 5. Forward power prices $/MWh (asxenergy.com.au)

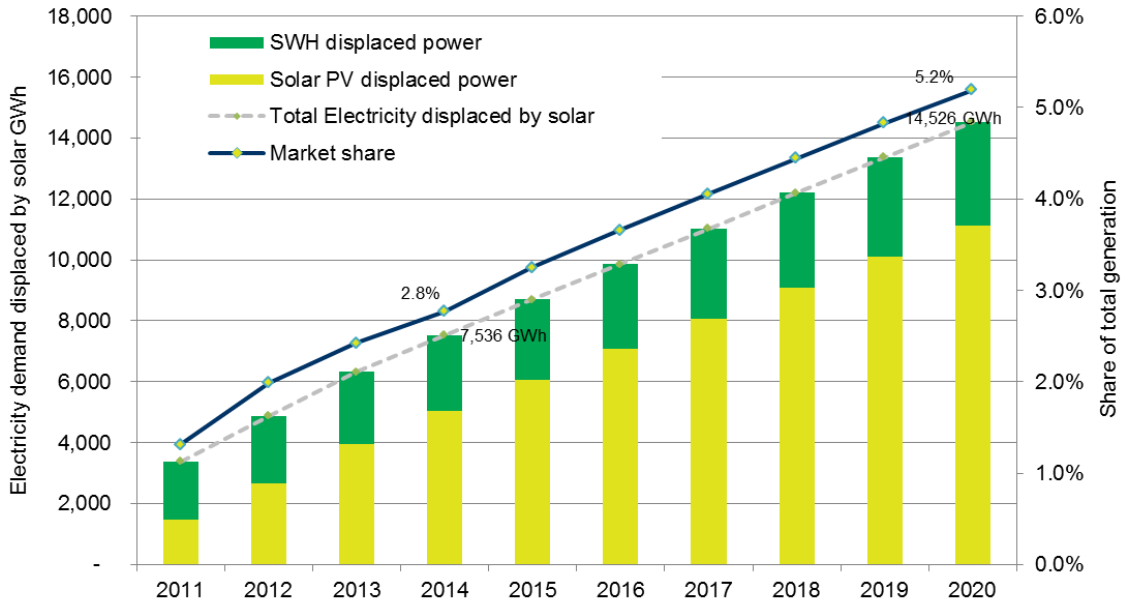
Base Future Prices Thu 15 May 2014				Full Historical Data
	NSW	VIC	QLD	SA
2015	36.42	31.85	47.40	47.70
2016	37.47	32.84	50.38	50.00
2017	41.48	36.27	52.76	56.74

Gas-fired generation currently accounts for 12 per cent of electricity generation in the eastern states National Electricity Market (NEM). With the rises in the wholesale price and demand from international markets, gas will be diverted from the NEM and the price of gas-fired generation will increase dramatically. In addition the emission intensity of power generation is set to increase, making achieving Australia's 5% emission reduction target much more difficult and much more expensive.

The SRES has an important role to play to protect Australian families and businesses against the impact of higher gas prices through:

- Electricity avoided by solar PV and SWH will amount to 7,536 GWh by the end of 2014 which will account for 2.8 per cent of total electricity demand. With the support of SRES this will grow to 14,536 GWh by 2020 or 5.2 per cent of total generation (refer to Figure 6).
- Importantly however solar PV produces power when it is needed the most during the middle of the day when the sun is shining and power prices are higher. Solar PV contributed 600MW to meeting the combined South Australia and Victorian peak during the heat wave in January 2014. This amounted to 5% of combined peak demand. Both South Australia and Victoria would have achieved record peak demand if it had not been for the contribution of solar PV. http://www.recagents.asn.au/wp-content/uploads/2014/01/140120-RAA-solar-makes-significant-contribution.pdf

Figure 6. Electricity demand displaced by solar



SRES market is working

The solar industry is in decline. The level of small-scale technology certificates (STCs) being created is falling and has been tracking to target since the beginning of 2013. Given the substantial fall in STC creation volumes this has resulted in substantially lower compliance costs for the liable entities under the RET.

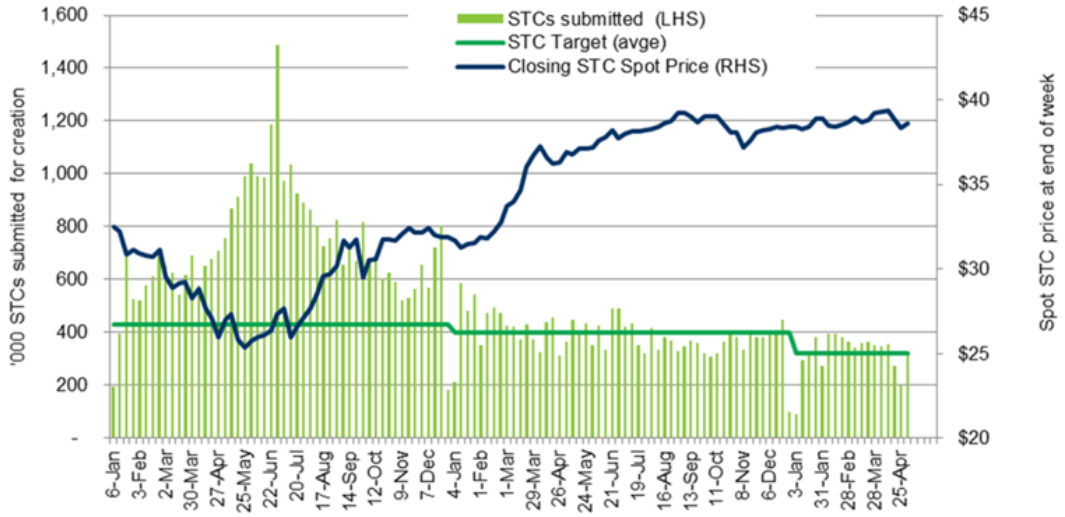
The STC price has been very stable and is sitting just under the $40 Clearing

House price.

These factors indicate the SRES is working as intended. There is no need to change the SRES. RAA echoes the recommendation of the 2012 RET Review, conducted by the Climate Change Authority just 17 months ago that:

"The SRES remain a separate scheme, and its broad structure remain largely unchanged. This would provide a degree of confidence and predictability for the small-scale installers, small businesses, households…participating in the scheme"

Figure 7. STCs created each week compared to weekly target

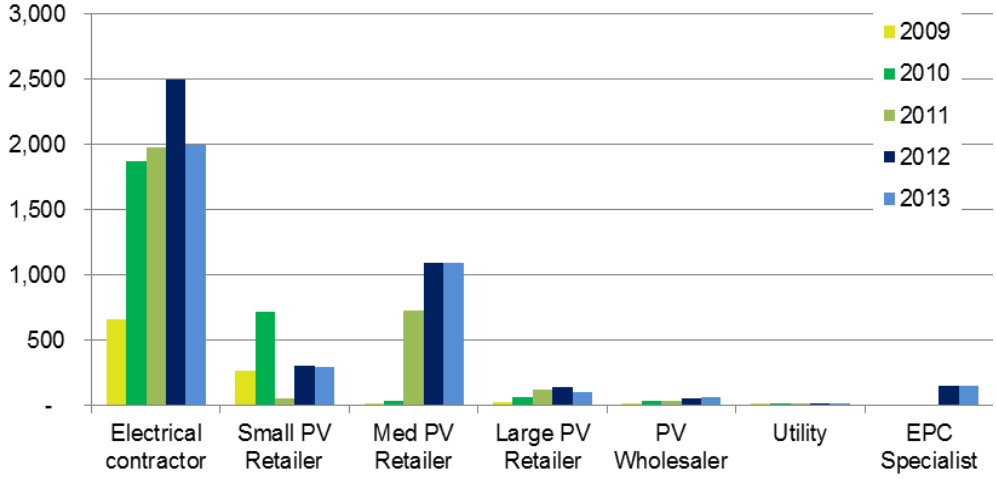


Source: Green Energy Markets

SRES helps create jobs and build strong industry

There are more than 4,000 businesses in the solar industry, mostly small to medium sized enterprises, spread across Australia. Correlating with where solar is most prevalent, most of the businesses are in rural and regional areas and in the mortgage belts of our large cities.

Figure 8. Composition of 4,000 businesses in solar industry

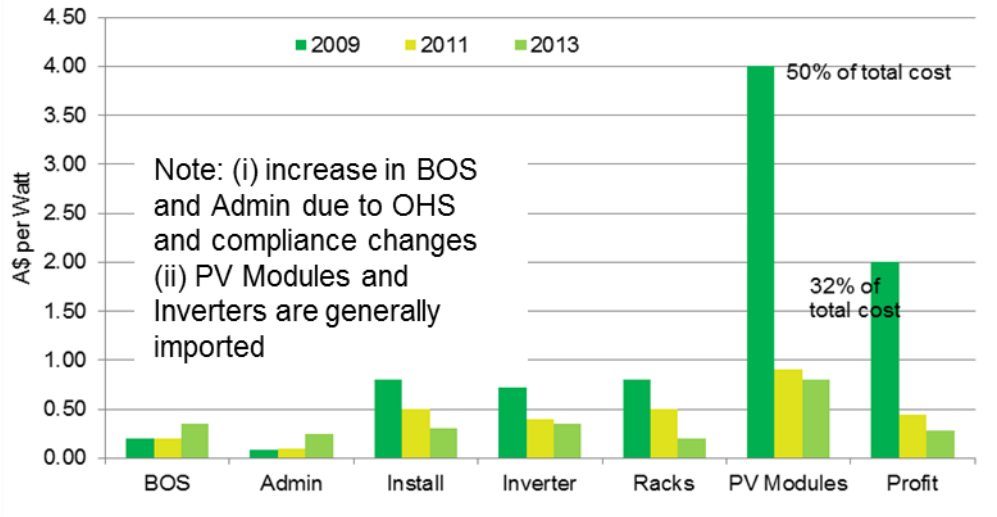


Source: Green Energy Markets, STC Modelling 2014

These businesses have made investments based on bipartisan policy support to the Renewable Energy Target. The RET Review Panel must recognise the substantial financial commitment made by SMEs and family businesses off the back of successive governments.

The SRES has helped drive scale, which has resulted in cost reductions through the industry chain with many innovations in the marketing, delivery and installation of solar systems.

Figure 9. Local cost reductions achieved through scale



Source: Green Energy Markets, STC Modelling 2014

SRES needed to maintain strong industry and solar jobs

The solar market is contracting, down some 20 per cent from the same time last year. It is projected the market will continue to decline through 2014.

Without the SRES, it is projected the market will crash some 40-50%.

The SRES is critically important for Australian families because it lessens the upfront cost of a solar system, which is a significant barrier at point of sale. The SRES reduces the cost of an average 3.5kW PV system by $2,600, and changes the payback period from 7.3 to 10 years.

As a demand side activity, solar PV and solar hot water suffers from similar barriers to energy efficiency. Even though it may make economic sense for a family to invest in solar, the upfront cost is a barrier to that investment. The SRES helps reduce that upfront cost.

Barriers to investment in solar are well documented and include:

- Energy is typically a small proportion of a consumers total income and does not get the attention that it deserves;
- Capital is not available to fund the energy efficiency improvement and where it is available, very short investment payback periods are required;
- Energy consumers may lack the knowledge or information to assess and implement energy efficiency and renewable energy improvements; and
- Split incentives (egg. between landlords and tenants)

The Australian Industry Group in its report, "Energy shock: pressure mounts for efficiency action" (July 2012) found that:

- *"to date most efficiency improvements have been modest, indicating that business capital for investment is either not available or is largely reserved for other purposes"*
- *"While a growing number of businesses are taking action to improve their energy efficiency, most are looking for quick wins and would only consider an energy efficiency project where the expected payback period was less than three years"*

Consistent with findings of previous Ai Group surveys

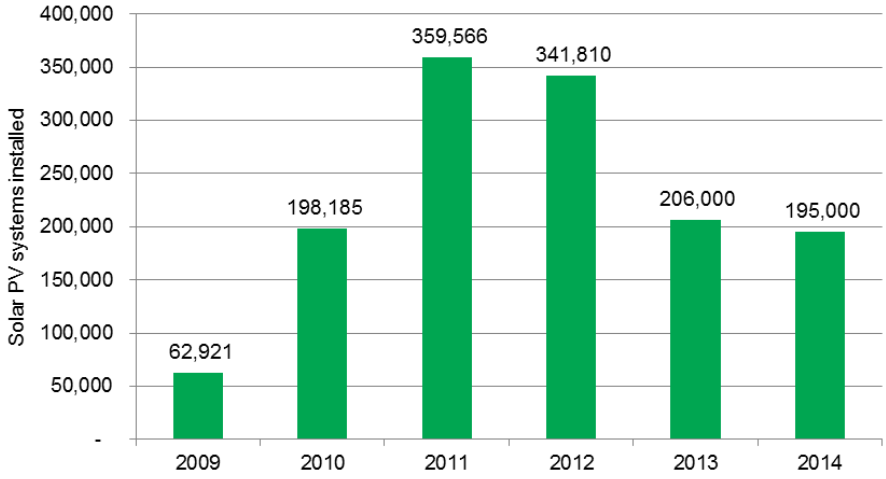
- *27 per cent of respondents spent the equivalent of more than 2 per cent of their sales revenue on energy (73% less than 2%)*
- *46 per cent of businesses reported an energy spend of less than 1 per cent of their turnover*

The SRES has been important in addressing a number of these barriers through:

- Being able to reduce the payback period to more acceptable levels; and
- The creation of an industry where service providers are able to bundle the value of the STCs into packaged solutions to customers.

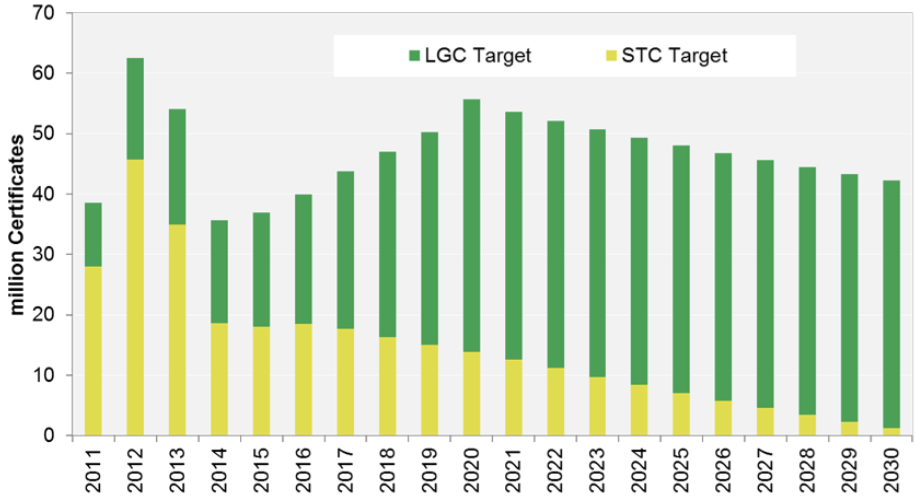
The reduction in sales of solar systems is evidenced in the following graph:

Figure 10. System installations have fallen dramatically



It must be noted the SRES took a significant haircut as a result of the last RET Review (just 17 months ago), with the phasing out of deeming. PV will now only receives 14 years of STCs in 2017 (15 years now) and this reduces by 1 year each year to 2030). This means that the cost of the scheme reduces dramatically over time. This reflects the decline over the past two years of system costs and the projected incremental decline in system costs in the future. However, future cost are difficult to project given they are subject to many external influences. This is another reason there is no reason to make further changes to the SRES or the RET.

Figure 11. Combined SRES and LRET to 2030



Who is installing solar

RAA recently released a comprehensive analysis of who is installing solar by postcode and income levels. The full report can be found at http://www.recagents.asn.au/wp-content/uploads/2014/04/GET-Postcode-

report-for-RAA-April-2014.pdf

The key conclusions from the report are:

- Rural and regional areas are over represented in solar installation statistics:
- Rural and regional areas have 42 per cent of all solar systems installed, despite having only 32 per cent of the housing stock. This translates into rural and regional areas having the highest uptake of solar systems per household at 29 per cent.
- Capital cities have 45 per cent of all solar systems installed, but 56 per cent of the housing stock. This translates into capital cities having the lowest uptake of solar systems per household at 18 per cent.
- Installation of solar systems in the capital cities were typically characterised by postcodes in the outer metropolitan mortgage belt;
- There is an inverse relationship between average incomes and solar penetration levels (as income levels increased, solar uptake declined);
- The suburbs with the highest penetration of solar systems in each state tended to be either regional or outer metropolitan; and
- The five suburbs in Australia with the largest number of solar systems are Bundaberg area (Qld), Mandurah area (WA), Hervey Bay area (Qld), Werribee are (Vic) and Hoppers Crossing area (Vic).

Conclusion

The SRES is working as expected, meeting annual targets set by Government and delivering against the policy outcomes determined by the Australian Government as well as meeting the objects of the Act. There is no reason to change the SRES, particularly given the fact there was a significant reduction to the SRES just seventeen months ago.

The RET has created a strong industry, generating tens of billions of dollars of investment and helping five million Australians reduce their power bills.

The RET must be maintained and left to fully deliver on its potential.

Yours sincerely

Ric Brazzale
President

16 May 2014