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Prepared for:

Rec Agents Association

*Industry Report:*

**Solar Businesses in Australia**



# Executive summary

This report has been prepared for the REC Agents Association and analyses the business composition of Australia's solar photovoltaic industry. A consideration of the solar hot water industry is outside the scope of this report. In Australia the solar industry is a small and medium enterprise (SME) industry.

The absolute majority (96%) of the 3,800 solar businesses in Australia are SME sized businesses. More than 93 per cent of the roughly 21,000 Australians who work in the Australian solar industry work in SME's.

It has been one of Australia's fastest growing employment and business sectors, having grown twenty fold in the last decade. It has declined in recent years as policy support has been removed and/or reduced.

In less than ten years, the industry has created more than \$17 billion of direct retail sales and tens of billions of flow on expenditure on in-direct support services

The solar industry is dominated by SME's, the mainstay of the Australian economy. SME's are locally focused, employ the largest proportion of Australians and represent the vast majority of active Australian businesses. Solar businesses make an important contribution to the Australian economy through the payment of income taxes and GST. More than half of solar businesses are micro businesses, with 66% micro and small businesses.

Australia's solar industry is underpinned by the Renewable Energy Target, with the Small-scale Renewable Energy Target helping Australian families significantly reduce their power bills by installing solar panels and solar hot water systems.

If the Renewable Energy Target is axed, demand for solar will fall by 40-50 per cent, with a similar decline in the number of jobs in the solar industry. The axing of the Renewable Energy Target could result in the closure of thousands of small and micro businesses.

# 1. Industry overview

The Australian solar photovoltaic (solar) industry has grown dramatically as the cost of solar has fallen and consumer demand has grown for solar energy.

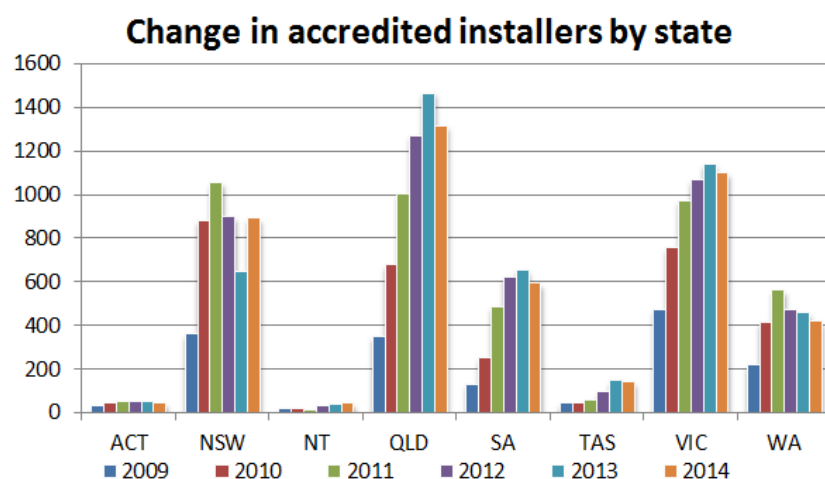
The Australian market is unique in the world being predominantly a residential small-scale market as a result of Government policy support that has favored such systems. As a direct consequence, the sales, marketing and installation workforce is predominantly and logically a retail oriented supply chain.

As is typical of retail and service industries, the solar industry is predominantly made up of small and medium enterprises (SMEs) capable of servicing a diverse range of consumers.

Although some market concentration has occurred, the industry servicing solar consumers is highly fragmented and consists of around 3,800 businesses (2013) that are as diverse and varied as the consumers they supply. Historically strong state based incentives, such as feed-in tariffs, have tended to further encourage the fragmentation of industry due to the different designs of state legislation, regulation and the differences in timing between State programs. There is clear evidence of the volume and viability of businesses rising and falling dramatically with incentive driven changes in demand.

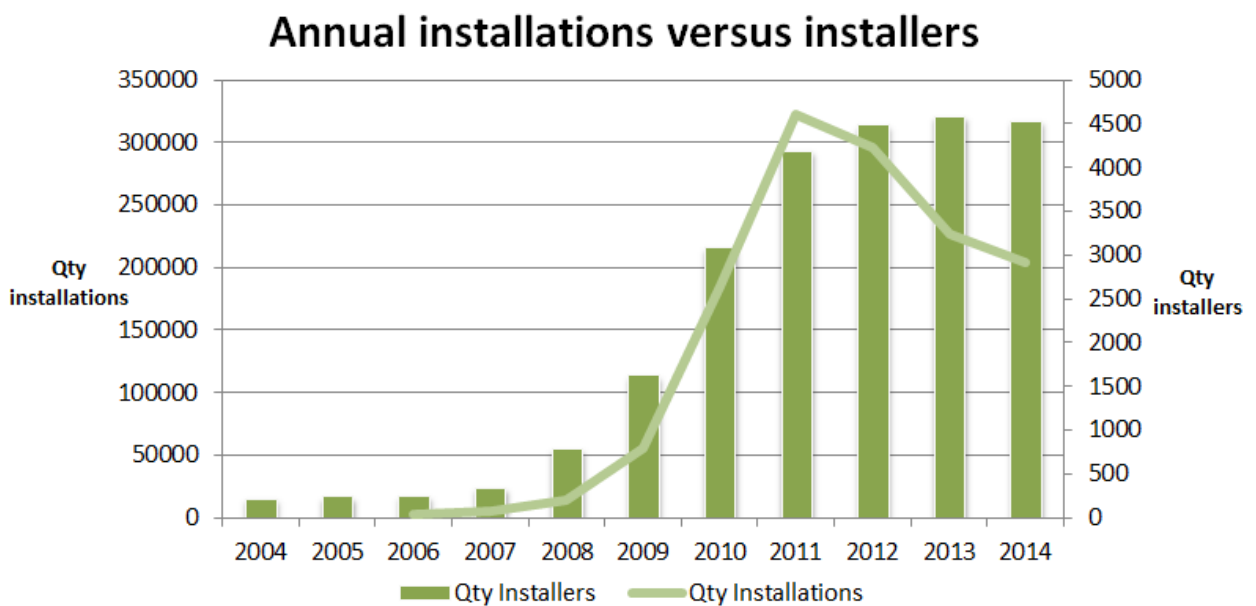
The industry is made up of a diverse range of businesses including manufacturers, wholesalers, retailers, installers, utilities and project development specialists. In addition, there is an organic flow on effect to support industries such as engineers, consultants, marketers, administrative support and creators of environmental certificates.

Evidence of the changing nature of business and employment opportunities can be seen in analysis of the Clean Energy Council's installer database. Although this is indicative of the number of accredited individuals rather than the number of businesses per se, it correlates strongly with business activity and is a good indicator of the changing industry trends and state based influence.



Analysis of the last ten years of data in absolute and proportional terms shows the dramatic increase in the number of accredited installers to 2013. The number of installers fell in 2014 after seven years of growth. If this trend continues, industry will shed around 1-2% of its accredited installers each year.

Intuitively, there is some lag in the impact on accreditation numbers, which disguises the real market effects that can be seen in the graph below. The Clean Energy Council has reported that anecdotally, the number of dormant (non-active) installers has increased although they may retain current accreditation listing. One sample telephone survey of installers conducted in late 2013 found a similar result.



## 2. Size and type of businesses

The Australian Bureau of Statistics (ABS) defines business types predominantly by their employee headcount. The definition of business types in accordance with this method is described according to the following:

- Micro Businesses 0–4 employees
- Small Business 0–19 employees
- Medium Business 20–199 employees
- Large business 200 or more employees

Therefore, by definition the characteristic “SME” definition applies to businesses with less than 200 employees. Across all industries, SME’s in Australia employ almost 46% of private sector employee’s and is the largest employment sector in the country.

ABS data also shows that SME’s represent 96% of the (2.13 Million) active businesses in Australia (2.04 Million). Four out of five SME businesses sold goods or services in the local area according to ABS data, while two in five businesses sold goods or services outside of the local area but within their state/territory.

SME’s are locally focused, employ the largest proportion of Australians and represent the vast majority of active Australian businesses.

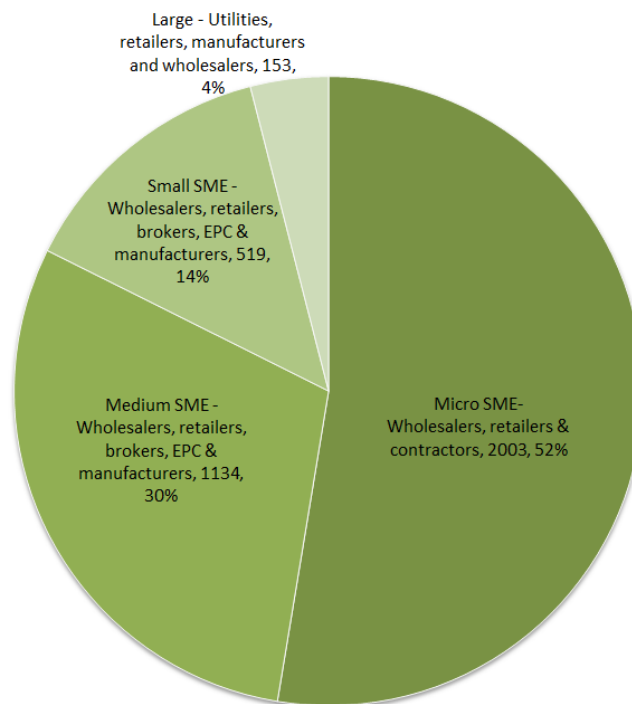
As a service and retail focused industry it is of little surprise then that the vast majority of the estimated 3,800 solar businesses in Australia therefore fit within this definition of SME’s. The ABS does not separately define or analyse statistics by solar businesses, however, using their definitions and industry sampling we have been able to analyse the characteristics of typical Australian solar businesses.

We analysed a sample of active solar businesses based on companies who together, represented more than 85% of (2013) solar sales volumes and approximately 5% of all the known active solar companies in Australia. We then categorized these businesses according to their business type, size and employee headcount in line with appropriate ABS definitions. Using this sample we were able to determine an average headcount per company type and size, and applied multiplier ratios based on this sample group across the remaining non-sampled Australian solar companies.

Although a greater sample sized would have been preferred, the methodology adopted is robust and represents the most detailed assessment of its type undertaken thus far. According to this analysis, the vast majority of solar businesses (96%) are SME’s with less than 200 employee’s and notably 53% of these are Micro businesses with less than 4 employees.

Together, Micro and Small businesses represent more than 2,500 businesses directly engaged in solar business. Similar to other service industries, solar is predominately the domain of small and medium sized business.

### Solar Business Size & Type (2013)



### 3. Geographic dispersion

Previous studies on the geographic uptake of solar by the REC Agents Association have shown that the majority of PV (53.3%) was installed in either non-capital cities or regional and rural areas. This data also reveals that many of the highest uptake areas in the country are rural or large non-capital cities. Logically, businesses and employees tend to be clustered around these areas to service demand.

Granular data on the exact location of the estimated 3,800 solar businesses is not readily available however; we can get a very strong indication of business dispersion by analysing the location of the 4,500 accredited installers, which is available.

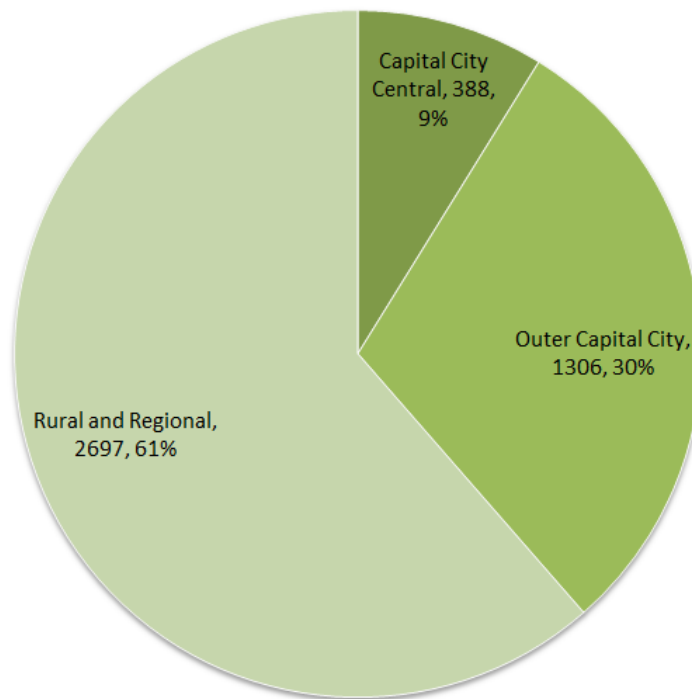
We have measured a trend in recent years away from very large national solar retailers towards smaller local retailers and installers which is a direct result of a number of public collapses and bankruptcies which have driven consumers to look for local suppliers who can more easily be held accountable. This is revealed through the growth in sales volume of small and medium sized PV Retailers.

Although there is some State based variation, across Australia we estimate based on Clean Energy Council installer maps that around 61% of installers are based outside the Capital city and outer metropolitan areas. Perth and Darwin are the exceptions where the majority are based in the Capital city and greater metropolitan areas, which is distinctive of the rural service nature of these towns.

Based on the uptake of solar and installer locations being largely outside Capital cities, there is a very high probability that SME businesses are spread across Australia with a similar geographic dispersion.

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## Geographic dispersion of Accredited Installers



State	Location	Qty Installers	% of State	Total State
VIC	Melbourne city	31	3%	
VIC	Outer Melbourne	305	28%	
VIC	Rural & Regional VIC	760	69%	<b>1096</b>
NSW	Sydney City	88	10%	
NSW	Outer Sydney	214	24%	
NSW	Rural & Regional NSW	587	66%	<b>889</b>
ACT	ACT City	17	40%	
ACT	Rural & Regional ACT	26	60%	<b>43</b>
QLD	Brisbane City	108	8%	
QLD	Outer Brisbane	397	30%	
QLD	Rural & Regional QLD	807	62%	<b>1312</b>
SA	Adelaide city	83	14%	
SA	Outer Adelaide	180	31%	
SA	Rural & Regional SA	327	55%	<b>590</b>
NT	Darwin city	23	51%	
NT	Rural & Regional NT	22	49%	<b>45</b>
WA	Perth city	38	9%	
WA	Outer Perth	210	50%	
WA	Rural & Regional WA	168	40%	<b>416</b>



## 4. Industry retail sales

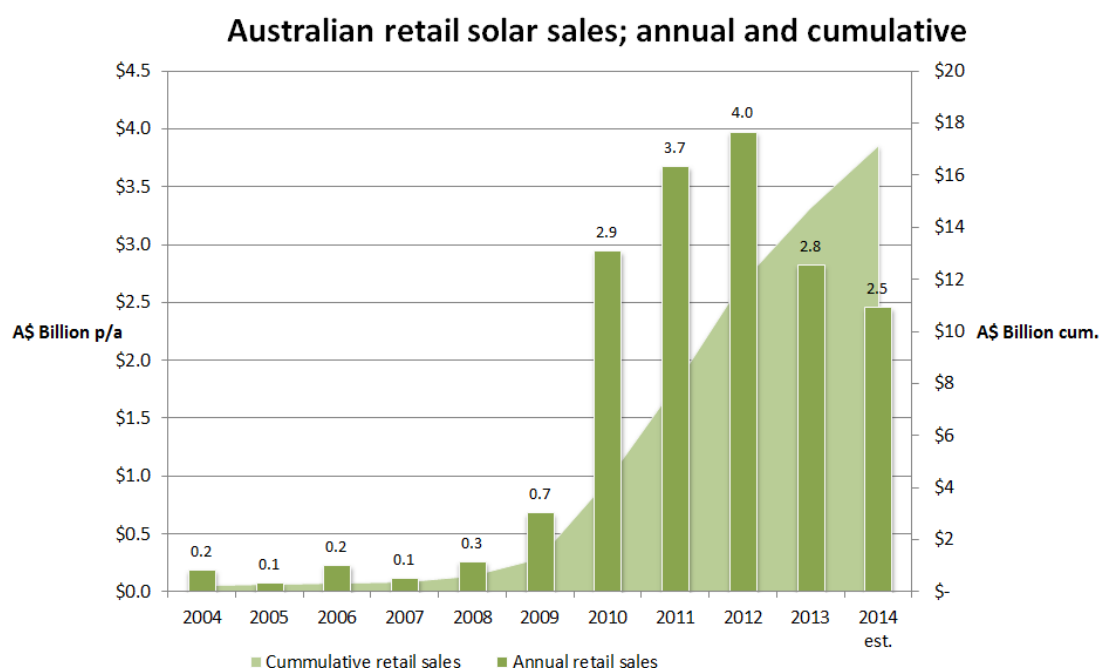
In calculating the value of industry retail sales we have considered the direct retail sales of the solar industry excluding rebates and GST across the various segments. Undoubtedly, there are wider indirect economic benefits such as: taxation; GST; interest payments; and a potentially very significant wider economic benefit, which would logically ensue from the indirect employment ratios.

There is a broad range of prices for solar products in Australia that change over time, vary by supplier and by market segment. We regularly monitor a broad range of prices at the supplier, wholesale and retail level and have selected an industry average for each market segment. These prices are represented inclusive of GST, post rebates (where applicable) but exclusive of any other taxes, interest payments or other values as an indication of the average gross consumer expenditure for each market segment.

The vast majority of consumer expenditure predictably comes from the largest segment, which is the Residential Grid Connected segment, representing \$2.7Billion dollars (2013) and 96% of total solar consumer expenditure.

Notably this value decreases as Solar costs fall and was estimated to be in excess of \$4 Billion dollars in 2012. We estimate that over the last 10 years the cumulative consumer expenditure on solar PV has been in the order of \$17 Billion dollars.

Based on the previously described indirect ratios, the flow on affects in terms of procurement of goods and services, taxation, interest payments and re-spending value would likely be Billions of dollars each year, in addition to the direct consumer expenditure.



## 5. Employment

SolarBusinessServices has conducted research into employment in the solar sector for the REC Agents Association and is currently updating this work.

Latest analysis suggests that previous employment estimates have underestimated the number of Australians directly employed in the solar sector and overlooked the in-direct employment benefits that flow on from this substantial sector.

A subsequent publication will provide all new insights into this latest research and the implications of employment in the Australian solar industry.

## 6. Conclusions

This report highlights that the solar industry comprises more than 3,800 businesses, predominantly small business and with annual retail sales of more than \$2.5 billion is a significant contributor to the Australian economy.

The implication of this is that solar is important to the Australian economy for many reasons, including: traditionally being a strong growth sector; and as being a significant domestic employer, which are both highly significant. In the absence of absolute and discrete solar industry data from Government, we have collated and analysed the most detailed data available and tested it against logical assumptions.

Like many other service sectors in the Australian economy, the solar industry is a SME industry. Should the Government axe or significantly reduce the Renewable Energy Target, we would see a 40-50% reduction in demand for solar and the closure of at least a thousand small businesses.

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