

Solar PV and STC market – review and update

Ric Brazzale, February 2015

SEIA Victorian meeting

Rewarding sustainable choices



Green Energy
Trading

- Solar's role in the electricity market
- Solar PV market assessment
- STC target, market and pricing
- RET review – where are we at?
- How will we go in 2015?

Who is Green Energy Trading?

- Independent REC Agent and accredited for commercial lighting and other activities in NSW & VIC
- Provide competitive pricing and payment terms
- Our difference
 - have best and fastest online system
 - finance broking for business systems



Renewables activism

www.greenenergytrading.com.au

[@greenenergytrad](https://twitter.com/greenenergytrad)



Green Energy
Markets

www.greenmarkets.com.au

- Research, consultancy and advisory associate (Green Energy Markets)
- Check out website for prices, research notes and other market information

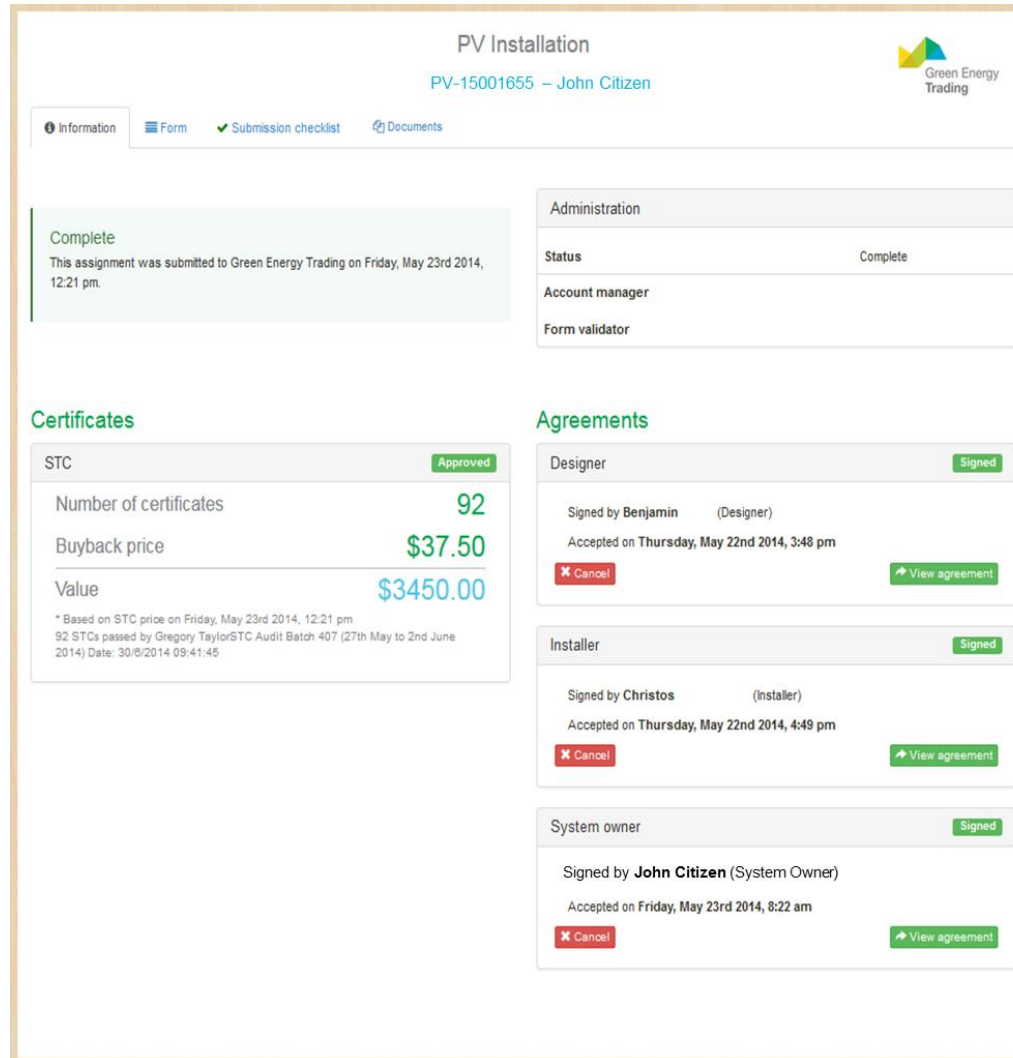
“Easy Sign” Fastest – Paperless system

- Several years to develop
- Electronic signatures (using secure certificate)
- Compatible with any Web enabled device
- More efficient and timely processing – passing benefit to customers through extra 30 cents for on-line processing

Nick Butler:

03 9805 0700

Nick.Butler@greenenergytrading.com.au



PV Installation
PV-15001655 – John Citizen

Information Form Submission checklist Documents

Complete
This assignment was submitted to Green Energy Trading on Friday, May 23rd 2014, 12:21 pm.

Certificates

STC	Approved
Number of certificates	92
Buyback price	\$37.50
Value	\$3450.00

* Based on STC price on Friday, May 23rd 2014, 12:21 pm
92 STCs passed by Gregory TaylorSTC Audit Batch 407 (27th May to 2nd June 2014) Date: 30/6/2014 09:41:45

Agreements

Designer Signed

Signed by Benjamin (Designer)
Accepted on Thursday, May 22nd 2014, 3:48 pm
[Cancel](#) [View agreement](#)

Installer Signed

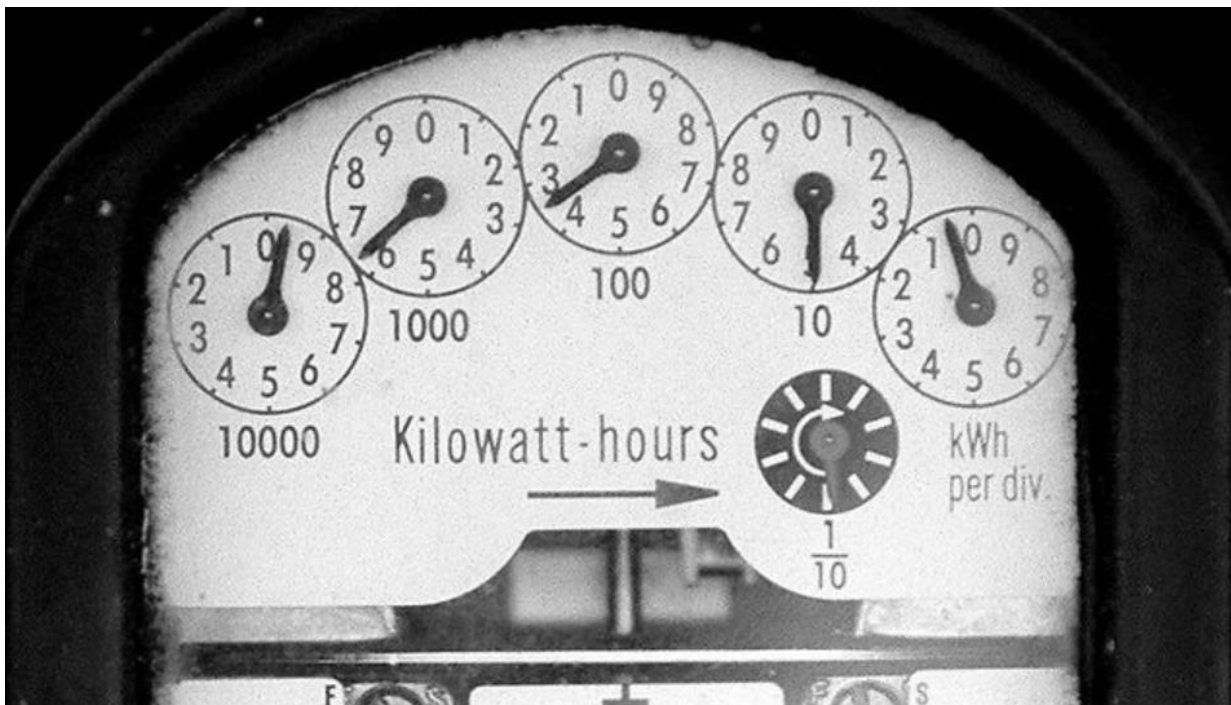
Signed by Christos (Installer)
Accepted on Thursday, May 22nd 2014, 4:49 pm
[Cancel](#) [View agreement](#)

System owner Signed

Signed by John Citizen (System Owner)
Accepted on Friday, May 23rd 2014, 8:22 am
[Cancel](#) [View agreement](#)

Save money and time by not having to chase up signatures

Solar's role in the electricity market



NEM consumption fell 1.1% in 2014

Review of the NEM in 2014

Green Markets Insights: 1-2015

Ric Brazzale, Director

www.greenmarkets.com.au

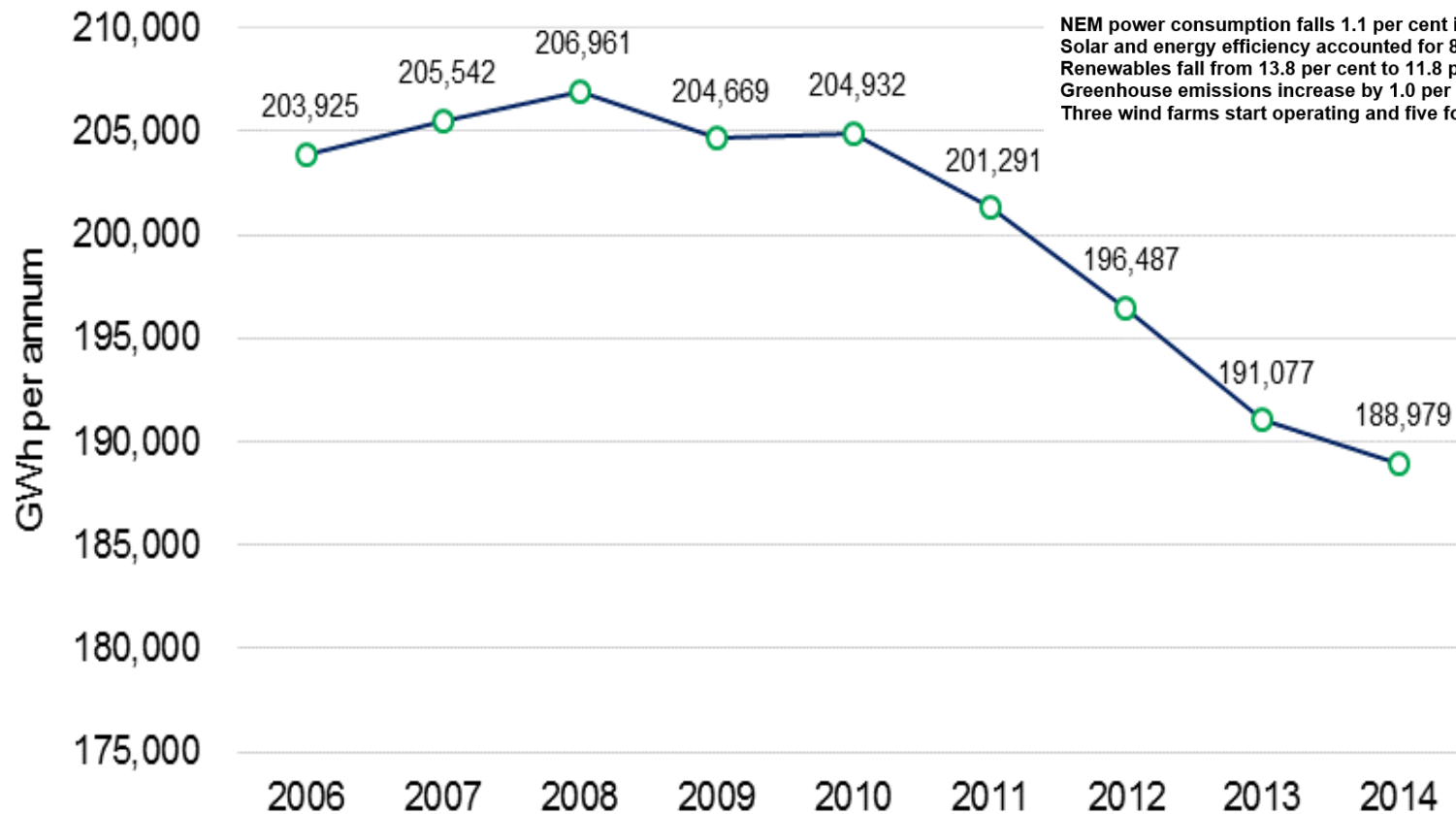
NEM power consumption falls 1.1 per cent in 2014

Solar and energy efficiency accounted for 89 per cent of the reduction

Renewables fall from 13.8 per cent to 11.8 per cent market share

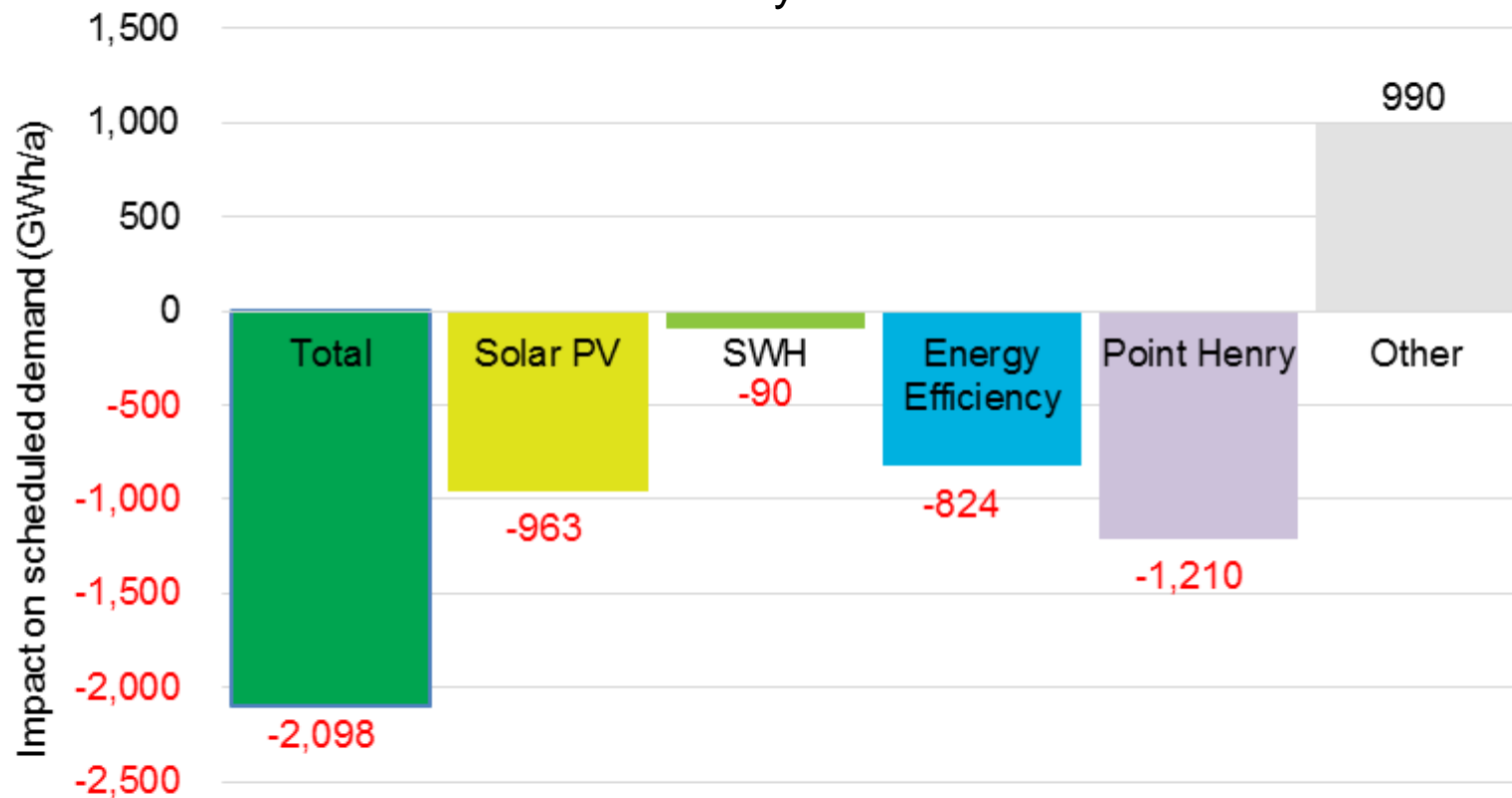
Greenhouse emissions increase by 1.0 per cent in 2014

Three wind farms start operating and five fossil-fuel plants cease



Solar and energy efficiency making material contribution

Average of 700 MW of solar PV installed in NEM each year over 2013 and 2014

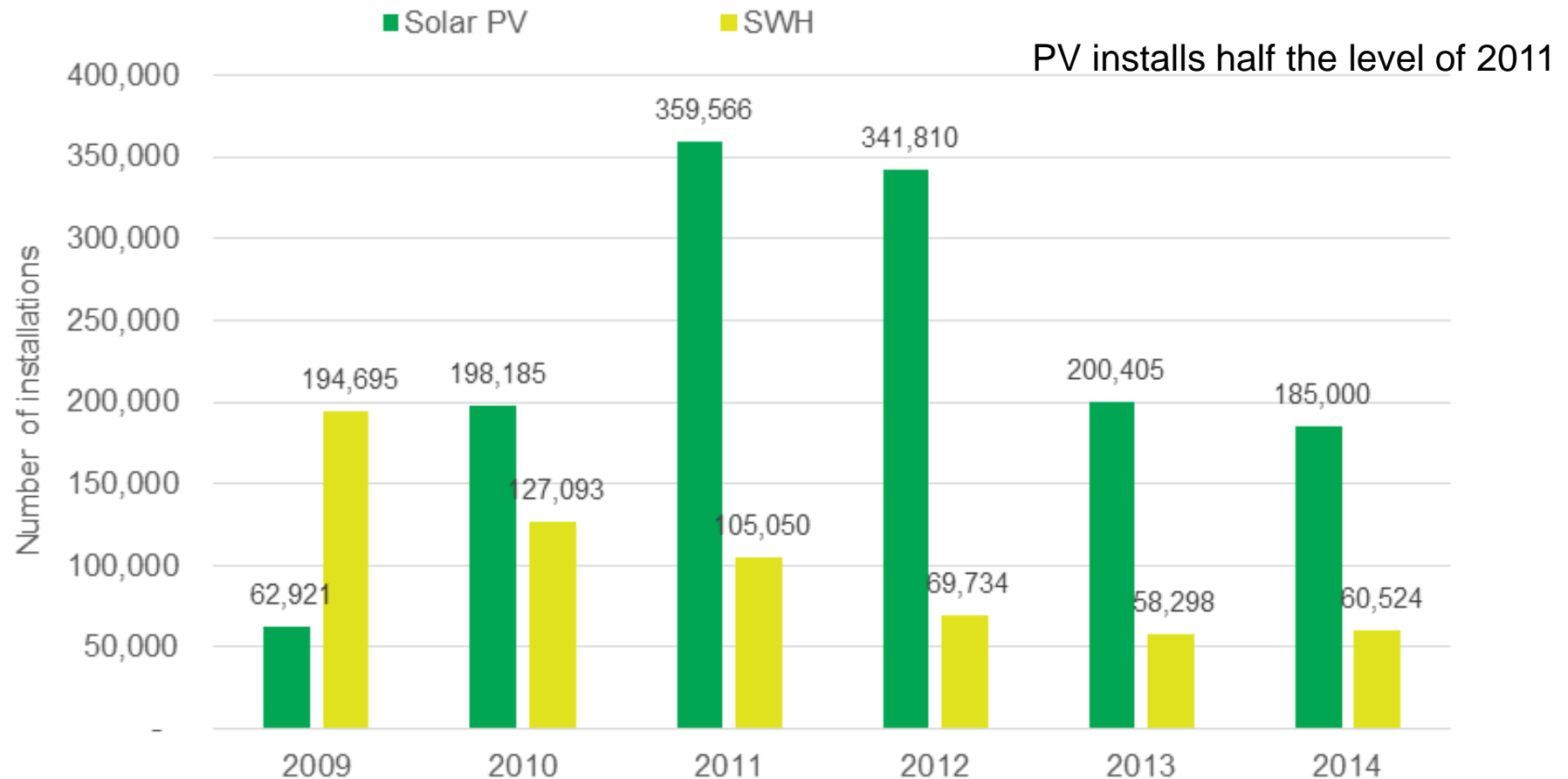


Solar PV contributed 46% of reduction in power demand

Solar PV Market Assessment



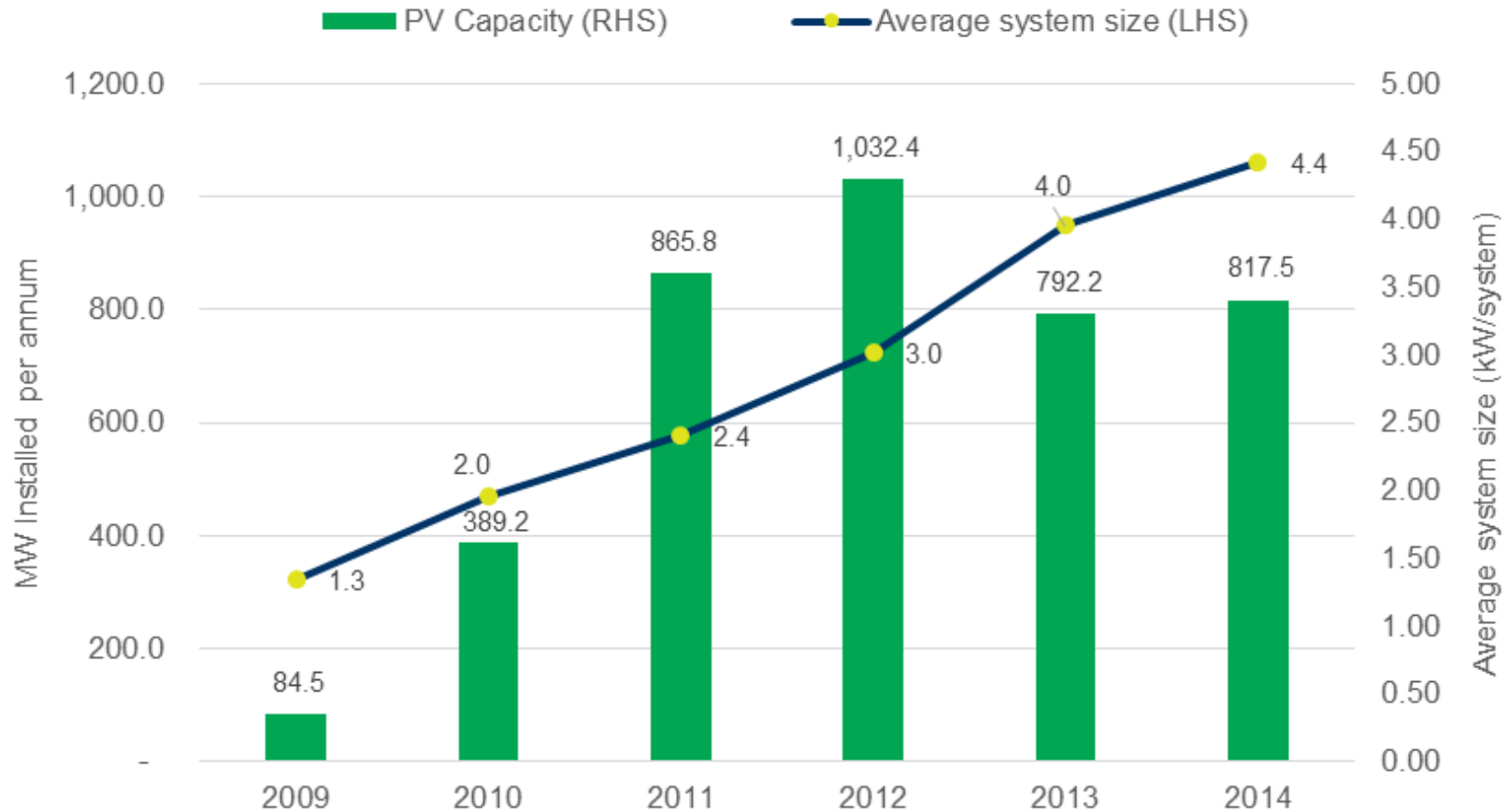
No. of solar installations falling (2014 PV installs half of 2011 level)



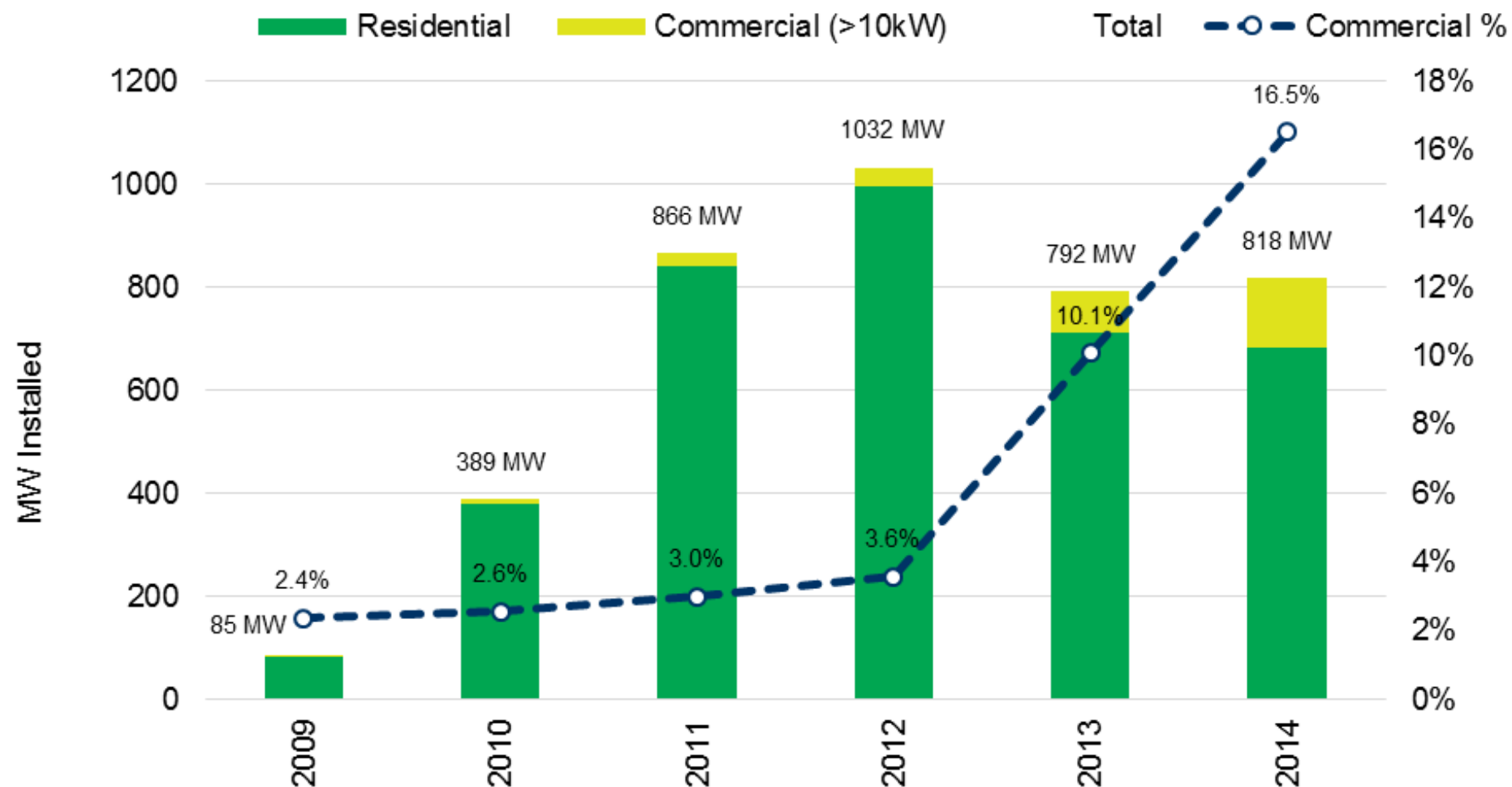
SWH installs one-third the level of 2009

PV capacity 20% lower than peak in 2012

System size increased by 47%

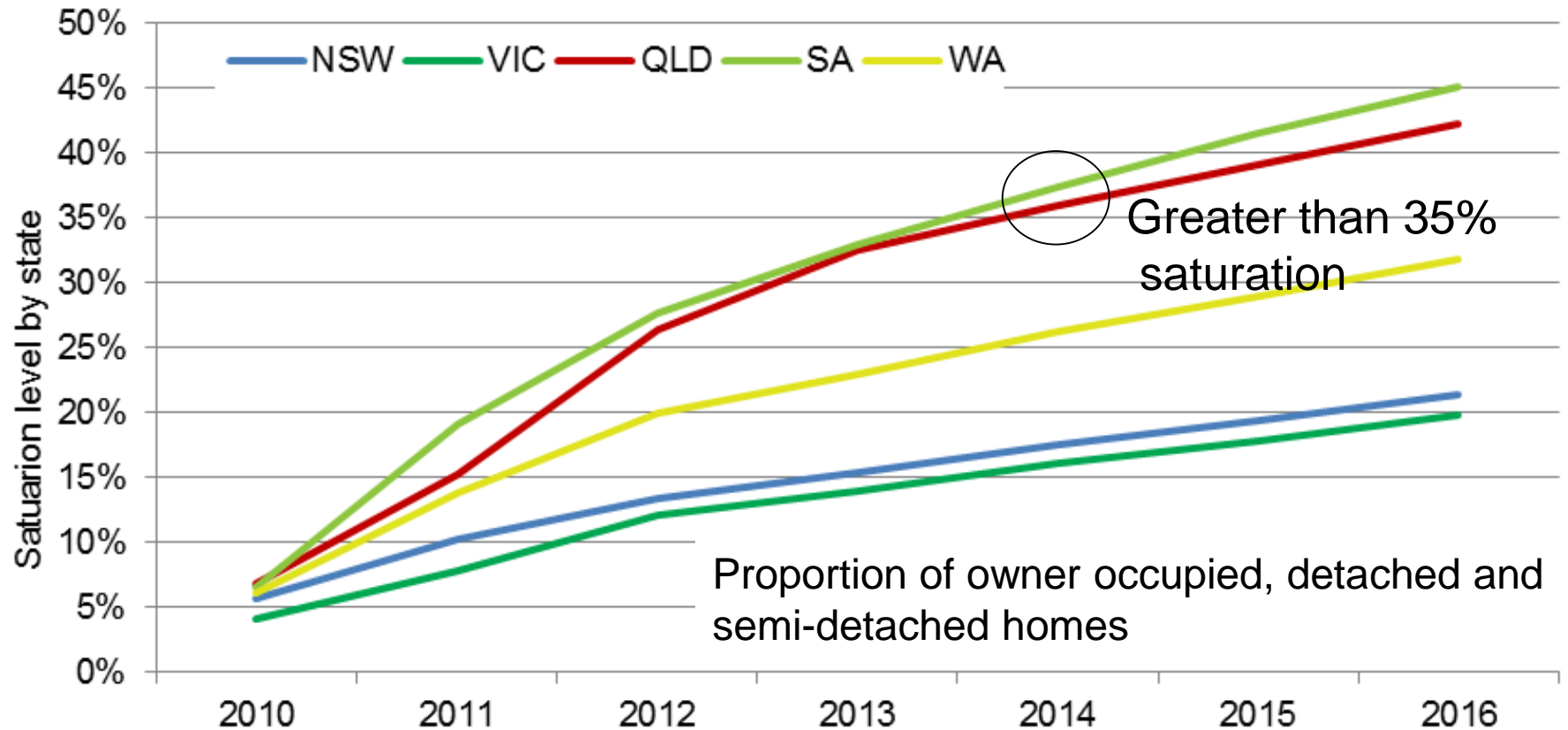


Commercial sized systems now 16.5% of PV market



Residential systems saturation

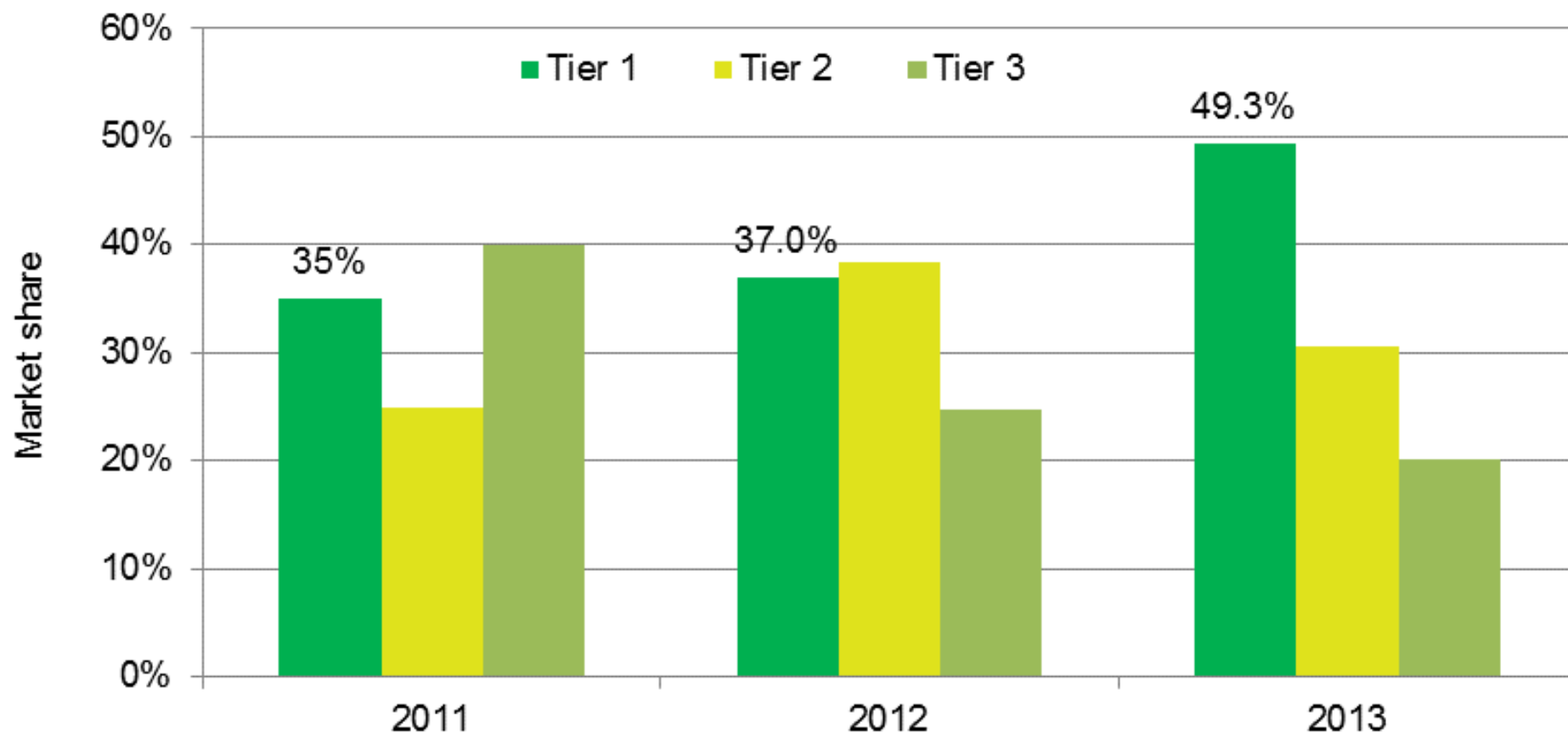
– high levels of saturation in Qld/SA



Source: Green Energy Markets: STC Modelling Report, Jan 2014

Number of residential installations expected to decline

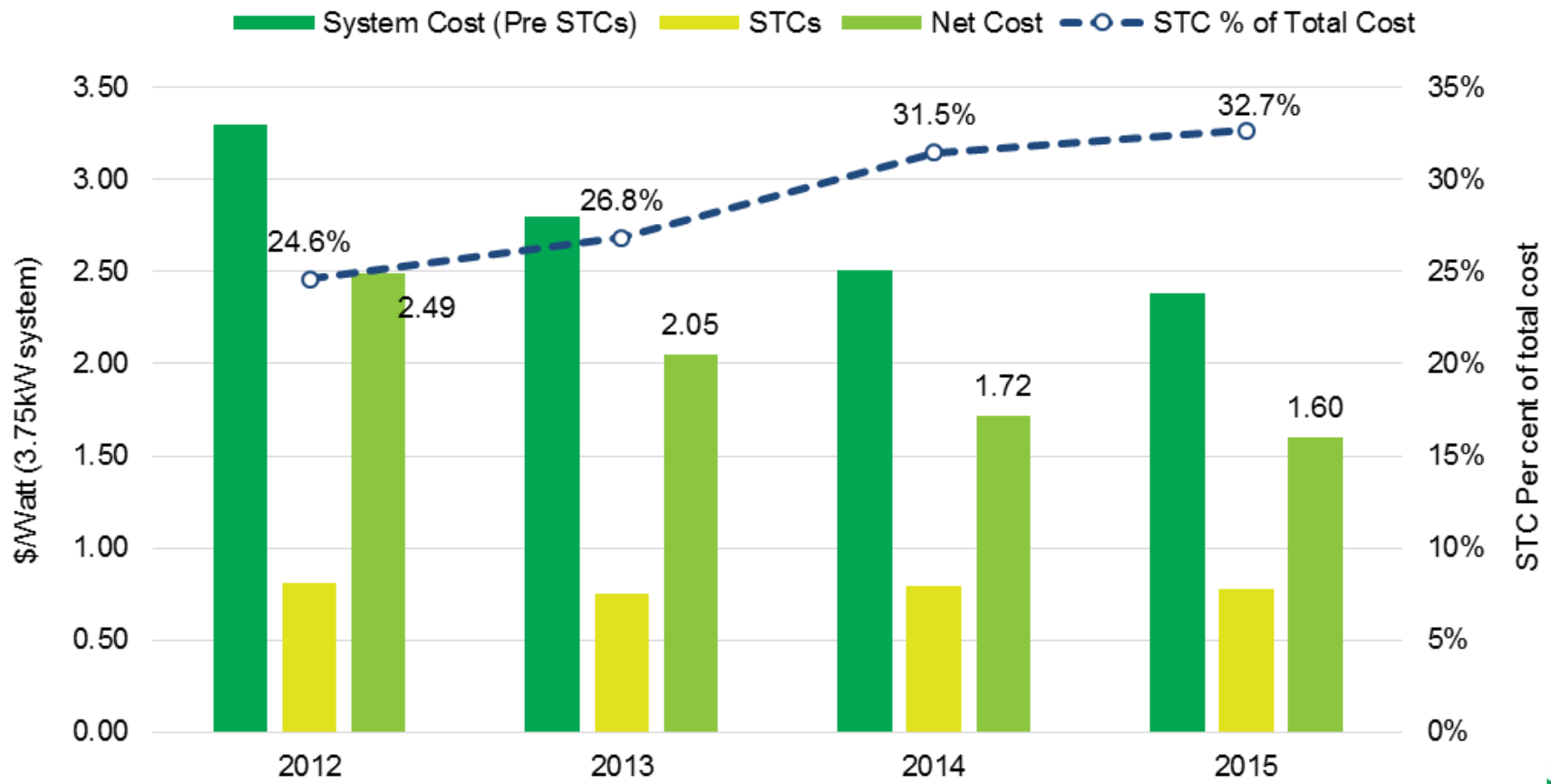
Quality of systems improving



Source: Green Energy Markets: STC Modelling Report, Jan 2014

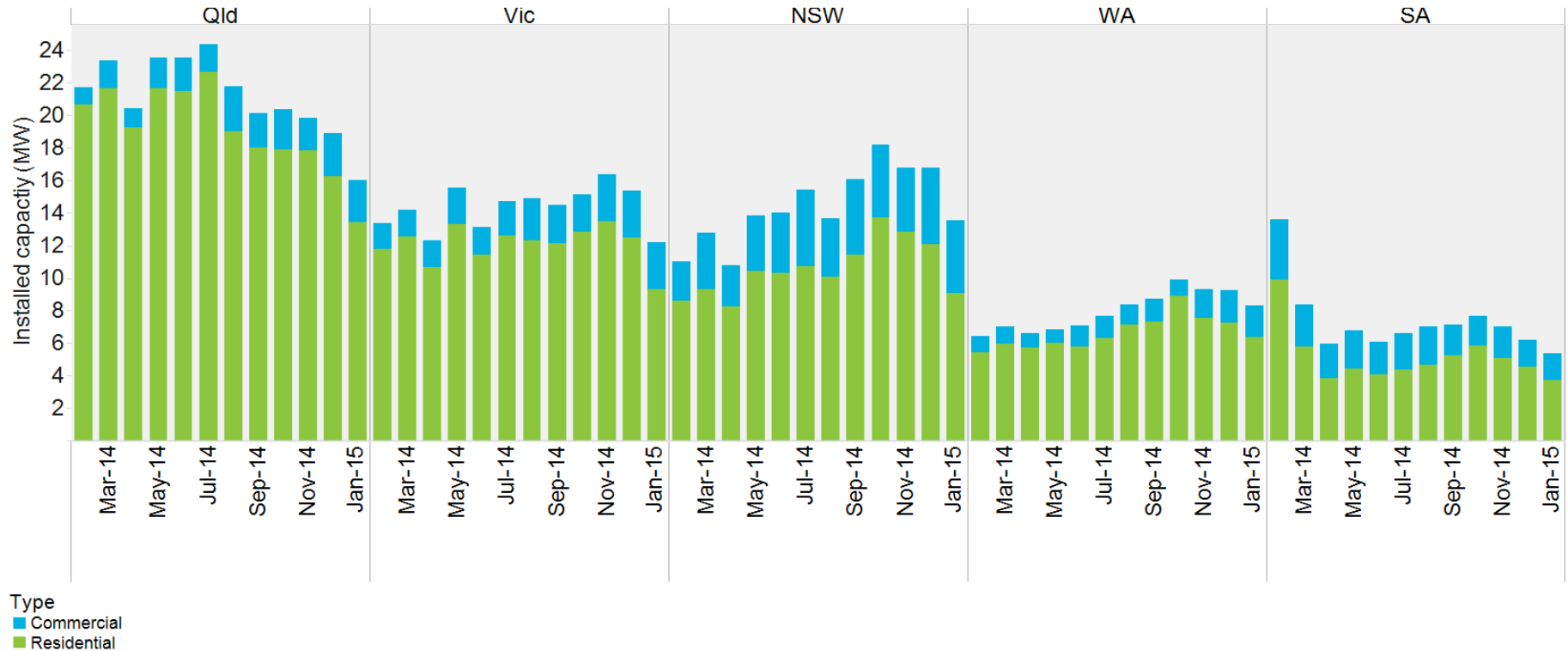
STC's have a material impact on system affordability

Based on estimate of average 3.75 kW system cost across Australia



STC's provide one-third of up-front cost

Commercial sized systems increasing (16.5% of capacity in 2014 cf: <5% in 2012)

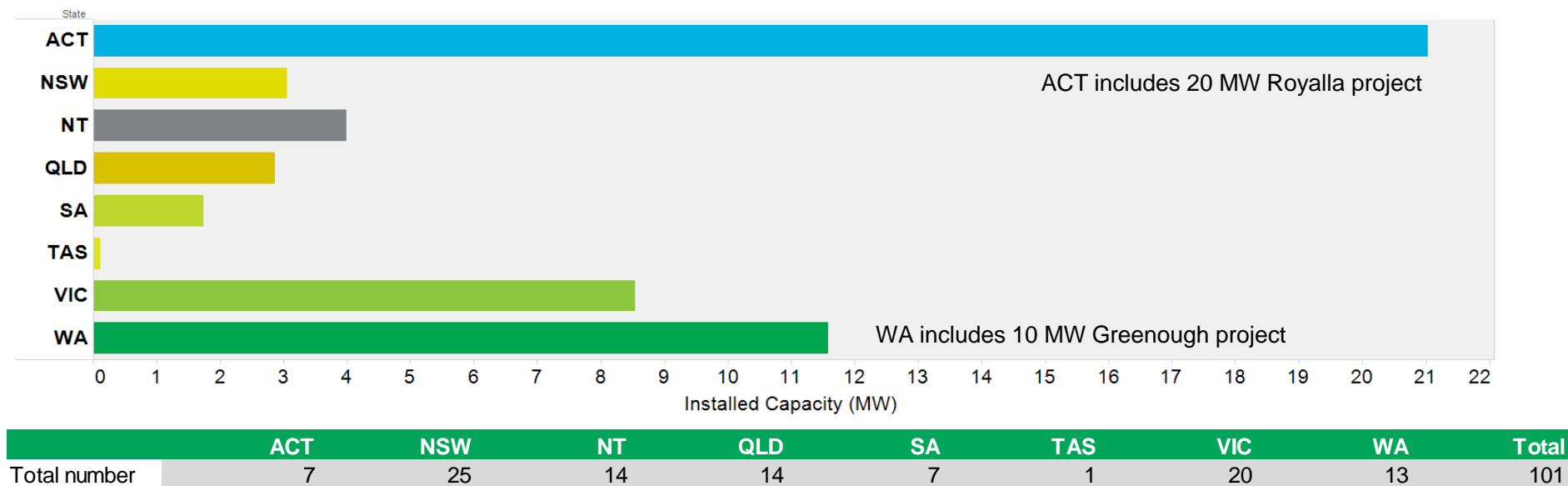


Commercial size systems are those greater than >10kW

Large scale solar is negligible in Australia at present (though growing)

- Approx. 61,000 LGCs in 2014 and 159,000 in 2015 (1%)
- 55 MW operating at end 2014 + 415 MW under development or construction (incl Solar flagships and ACT tender)

As at 31 December 2014



Total of 8.5 MW installed in Victoria (20 projects)

PV in Victoria – by numbers

Suburb (area)	Postcode	Systems Installed	kW Installed
Total Victoria		246,718	720,798
Major Suburbs			
Hoppers Crossing	3029	4,966	12,969
Werribee	3030	4,454	12,399
Cranbourne	3977	4,512	12,332
Craigieburn	3064	3,018	8,617

PV in Victoria – 2014 by numbers

2014 – 40,433 Installations created STCs

STC Systems

Commercial (>10kW) 25 MW (15.6%)

Residential 146 MW

Total of **171 MW**

2014 – 11 Power Stations registered at approx. 5.6MW

Nominated Person	Power Station	Accreditation date	Capacity MW
Diamond Energy Pty Ltd	Mildura Solar Park 1 - Koorlong - VIC	3/04/2014	3.20
Energy Aware Pty Ltd	Ultra Plas Springvale - Solar - VIC	30/07/2014	0.29
Energy Matters Pty Ltd	Investec Elizabeth Street Solar - VIC	4/09/2014	0.15
Energy Matters Pty Ltd	Springvale Botanical Cemetery Solar - VIC	14/10/2014	0.20
Garacama Pty Ltd	Piangil Solar - VIC	18/06/2014	0.20
Green Energy Trading Pty Ltd	Tip Top Butchers Solar - Laverton North - VIC	21/01/2014	0.20
Life Ministry Centre Limited	Oxley Stadium and College Solar - VIC	20/05/2014	0.20
Mars Australia Pty Ltd	Mars Chocolate Australia Solar - VIC	10/11/2014	0.21
True Value Solar Pty Ltd	Lago Smallgoods Solar - VIC	15/09/2014	0.30
TT Steel Centre Australia Pty Ltd	TT Steel Solar - VIC	25/07/2014	0.50
Wodonga Rendering Pty Ltd	Kane Road Wodonga Solar - VIC	24/10/2014	0.20
Total Capacity			5.65



PV in Victoria – 2014 by numbers

Who created STCs?



STCs created for Solar PV in Victoria during 2014

Agent	VIC	Share	
True Value Solar Pty Ltd	378,262	12.3%	
GREENBANK ENVIRONMENTAL PTY LTD	342,152	11.1%	**
CO2 Environmental Trading Pty Ltd	290,979	9.5%	**
Green Energy Trading Pty Ltd	244,355	8.0%	**
P and N PTY LTD T/A EURO SOLAR	123,473	4.0%	
Emerging Energy Solutions Group Pty Ltd	122,076	4.0%	**
GREEN ENGINEERING (VIC) PTY. LTD	115,540	3.8%	
FORMBAY TRADING PTY LTD	92,704	3.0%	**
CitiSolar QLD Pty Ltd T/A PGK Distribution	76,216	2.5%	
Energy Matters Pty Ltd	66,286	2.2%	
Powerark solar pty ltd	58,848	1.9%	
TVS FRANCHISE PTY LTD	51,302	1.7%	
Renewable Energy Traders Pty Ltd	41,993	1.4%	**
Trade In Green Pty Ltd	40,539	1.3%	**
BEDLAM ENTERPRISES PTY LTD T/A Cola S	40,388	1.3%	
Other	985,271	32.1%	
	3,070,384		

Note: Aggregators are denoted "***"

STC Target, market and prices



2014 STC Target – how did we go?

www.greenenergytrading.com.au

Under “News”

Green Energy Insights

Solar tracks 13 per cent above STC target for 2014

3 February 2015
Ric Brazzale
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www.greenmarkets.com.au
@greenenergytrad

The level of solar installations registering Small-scale Technology Certificates (STCs) in 2014 was 13 per cent above the STC target. Both solar PV and solar hot water installations were higher than the level incorporated into the 2014 target.

- Solar PV installations creating STCs amounted to approximately 816 MW (7 per cent higher than the target level); and
- 60,000 solar hot water systems created STCs in 2014 (27 per cent higher than target).

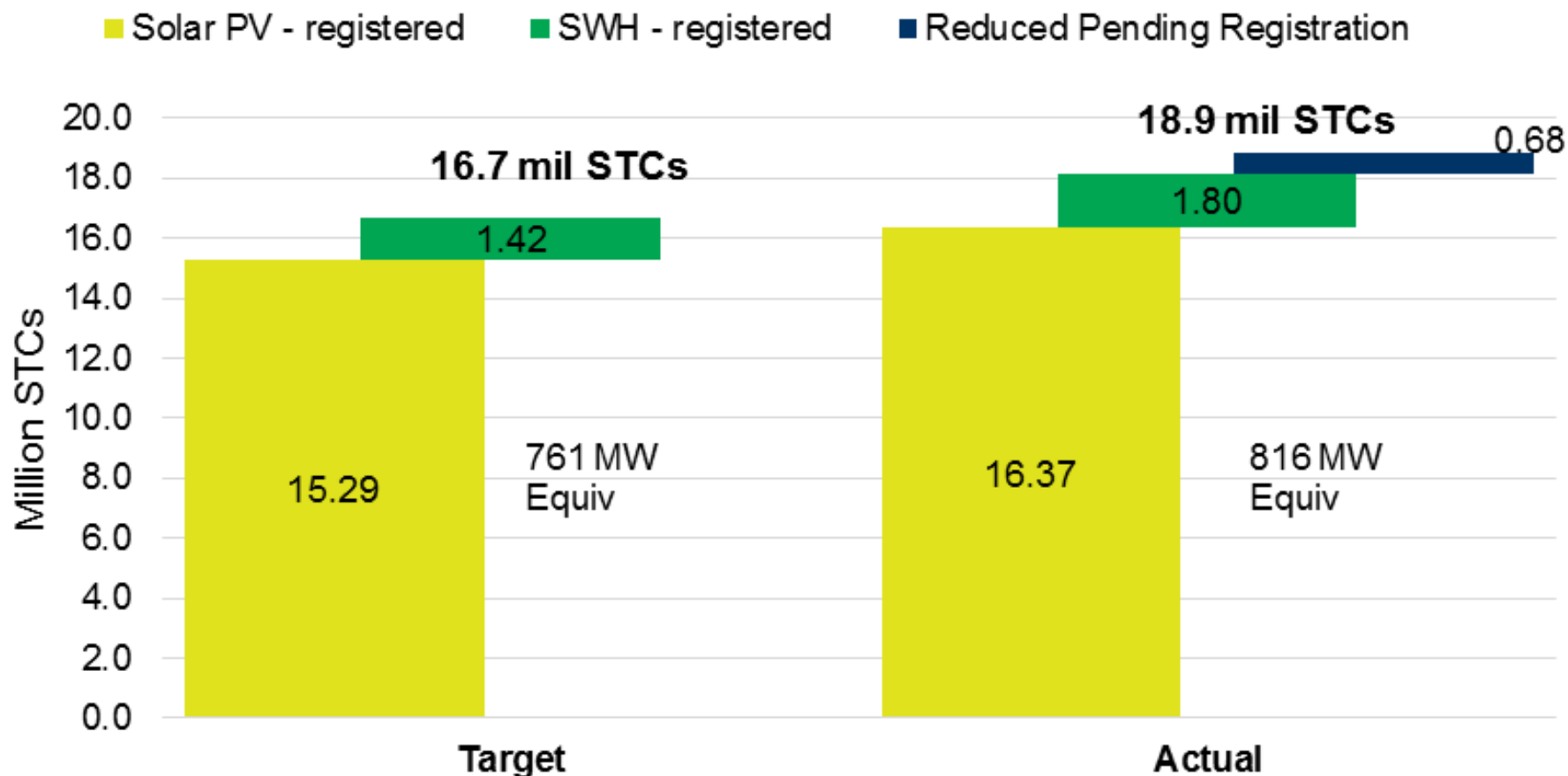
Having reached the end of 2014 we have assessed how the solar industry has performed in meeting the 2014 STC Target. The Small-scale Renewable Scheme (SRES) comprises a self-correcting target. The target is determined based on an estimate of the likely level of STCs to be registered for the year and adjusted for any surplus or deficit from the previous year. The STC target for 2014 was 18.66 million STCs which comprised an estimate of 16.71 million to be registered in 2014 together with 1.95 million surplus STCs carried forward from 2013. The 16.71 million STC target for 2014 translates into solar PV installations of approximately 761

2014 Target of 18.66m STCs comprising:

- STC registrations for 2014 of 16.71m
- Surplus carried forward from 2013 of 1.95m

18.85m STCs were registered in 2014 – 13% more than 16.71m target

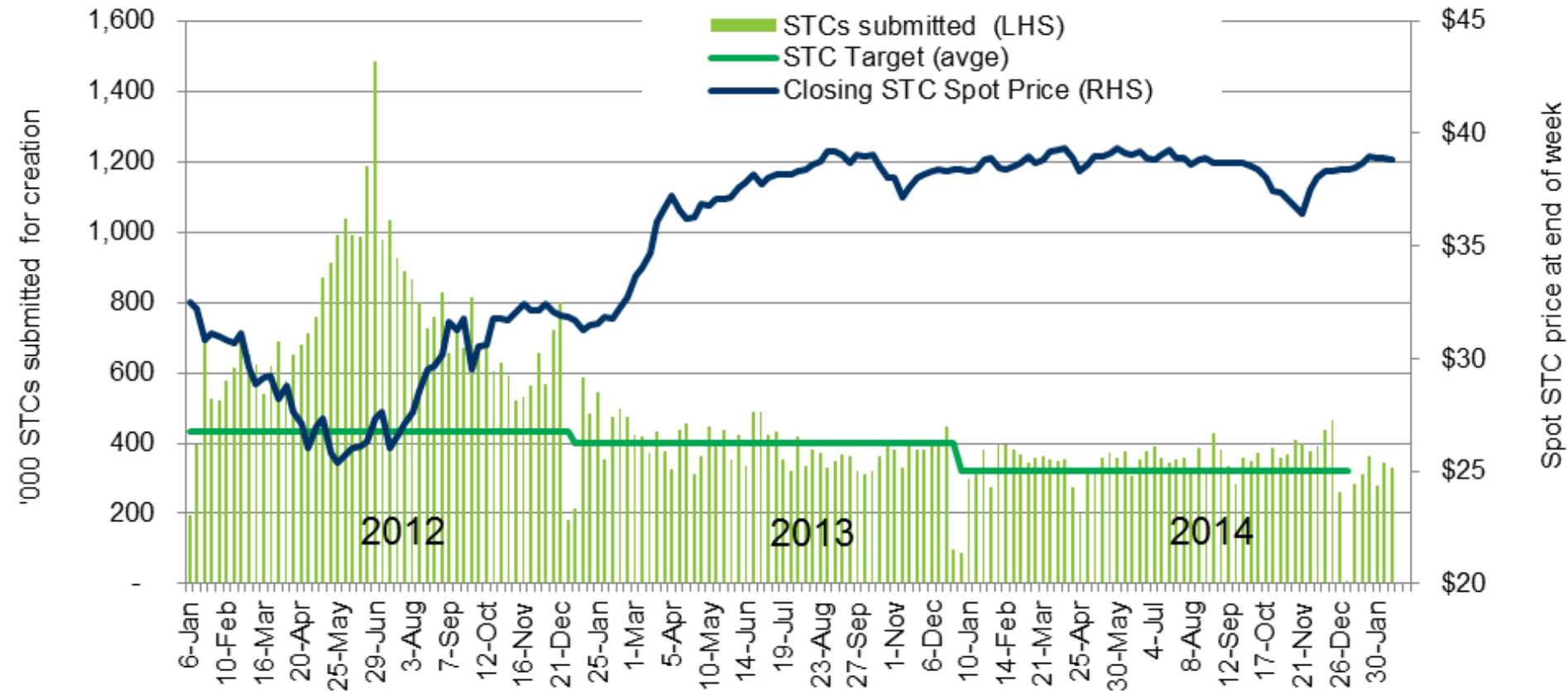
Why did we exceed target?



More Solar PV (+55MW)	+1.1m
More SWH	+0.4m
Reduced Pending Registration	+0.7m
Total:	+2.2m

Has been slow start to 2015

STC prices stable since Apr 2013



Current spot: \$38.90

GET currently paying: \$37.00 + \$0.30 for on-line (3 day Payt)

RET Review where are we at?



Initial position on the RET (announced on 22 October) and centres around four key elements:

- The RET should represent a real 20 per cent
- Support for household solar systems should not be changed
- Pressure on energy intensive trade exposed sectors should be reduced
- The renewables sector should have greater clarity by removing the need for a review of the target every two years

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- The RET should represent a real 20 per cent
- Support for household solar systems should not be changed
- Pressure on energy intensive trade exposed sectors should be reduced
- The renewables sector should have greater clarity by removing the need for a review of the target every two years

Implication that there will be changes to “non household” systems – Warburton review recommended reducing threshold for SRES from 100 kW to 10 kW

The ALP publicly tabled its position (together with the Clean Energy Council) on 18 December with the following key parameters:

- No changes to the Small-Scale Renewable Energy Scheme;
- Consider providing full exemption to EITE sectors from the LRET;
- Minimal changes to the LRET in the interest of restoring bipartisanship;
- Any changes must ensure sustainable investment; and
- Any agreement must be endorsed by both leaders of both major parties in the interest of ensuring long term certainty for the renewable energy industry.

Negotiations have recommenced

- Appears that Government has softened its stance on the LRET target
- Reports that it is considering a target in the low/mid 30,000 GWh



The screenshot shows the top of The Guardian Australia website. The header is dark blue with navigation links: sign in, subscribe, search, masterclasses, and Australia edition. The Guardian logo is prominently displayed, along with the text "Winner of the Pulitzer prize". Below the header is a navigation bar with various sections: australia, world, opinion, sport, football, tech, culture, lifestyle, fashion, economy, travel, media, environment, and all sections. The main content area shows a news article titled "Abbott government shows signs of shifting ground on climate policy" under the "Australian politics" category. The article is by Lenore Taylor, political editor, and is dated Tuesday 10 February 2015. The article text mentions "Government preparing to make concessions over RET and adopt more consultative processes to set new greenhouse emissions reduction target". There is a photo of wind turbines in the background. To the right of the article is a large red advertisement placeholder. The bottom of the page shows social media sharing options and a page number "28".

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home > australia

Australian politics

Abbott government shows signs of shifting ground on climate policy

Government preparing to make concessions over RET and adopt more consultative processes to set new greenhouse emissions reduction target

Lenore Taylor,
political editor
@lenoretaylor

Tuesday 10 February 2015
19.04 AEST

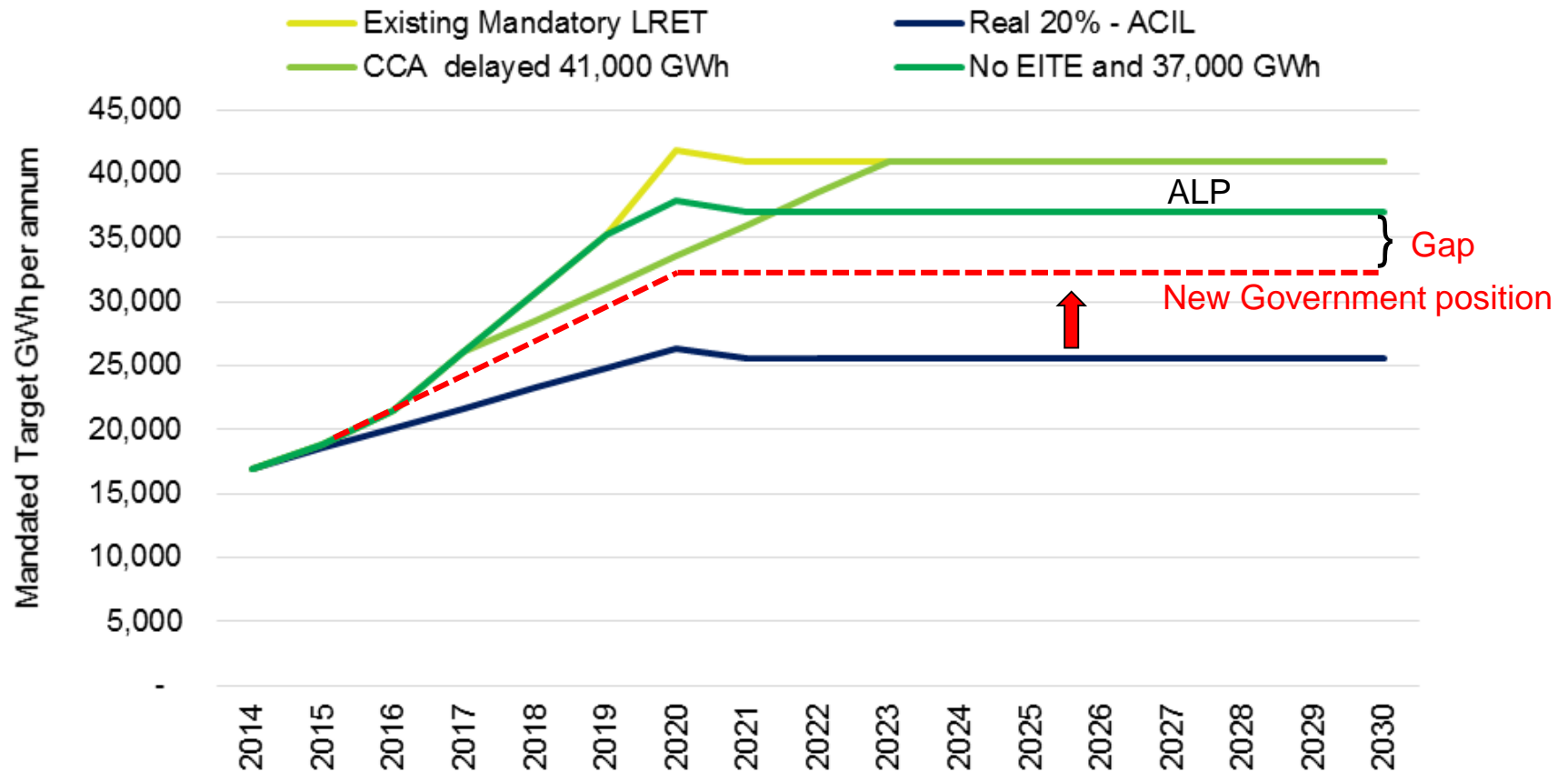
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28

Agreement on LGC Target?



How will we go in 2015?



- RET resolution likely in 2015 (>50% chance)
 - Possible compromise target of 35,000 to 37,000 GWh by 2020
 - No change to SRES (threshold remains at 100kW)
- SRES Target to be set by end March – reasonable to expect that it will reflect current level of creation
- Solar PV installations – modest increase on 2014 level of 817MW:
 - Residential installations to continue falling
 - Commercial sized installations continue to increase
- SWH installations to increase slightly on 60,000 creating STCs in 2014
- If the above happens then we can expect that STC price will remain stable – vary \$2-\$4 depending on quarterly cycle

BUT

- Changes in installed PV cost – impact of falling exchange rate
- Electricity pricing and competitive response from supply side of industry
 - Increases in fixed / non-avoidable electricity costs
 - Network connection and access
- Increase competition from energy retailers (Origin and AGL have announced aggressive solar plans) also new Retailers offering solar solutions
- Political and community support for renewables is critical – need to maintain political advocacy and need to maintain consumer support

Other emerging issues

- Regulator rules for system expansions beyond 100kW
- Choice survey (Jan 2015) – 25% of customers have had issues with their PV system
- Recent SMH and Sydney Telegraph articles on system quality (and Minister Greg Hunt's response)

Environment Minister Greg Hunt has given the Clean Energy Council one week to conduct an "urgent and immediate" investigation into Australia's multibillion-dollar solar installation industry.

Mr Hunt has written to the council's chief executive Kane Thornton after a Fairfax Media investigation [on Sunday revealed](#) concerns over the increasing prevalence of cheap, shoddy rooftop solar systems that are failing inside five years.

Mr Hunt has demanded proof from the CEC, the peak body for the solar industry, that there is not a systemic and potentially dangerous issue associated with the flood of cheap, mainly Chinese solar panel imports that have dominated the market in recent years.



- Solar PV market seems to be stabilising at around 800-820 MW
- Is making a material contribution to reducing demand (and emissions) and we are starting to see supply side response
- RET Review outcome more positive but uncertainty remains
- Industry cannot take political and community support for granted

Thank you

Presented by:
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