

Solar market update

Ric Brazzale, May 2016

Australian Solar Council
2016 Solar Conference

Rewarding sustainable choices



Green Energy
Trading

- Small-scale solar declining – where will it level out at?
- Policy support for small-scale solar
- Large-scale solar – building momentum – but it is all about the LGC price
- RET and other policy support measures

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
 - register and contract power stations



Renewables activism

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We can expect over 1000MW of large-scale renewables projects including 450MW of large-scale solar to be committed this year. We'll still fall short of the Renewable Energy Target in 2018 but the problem lies with financier confidence, not a lack of economically viable projects.

Green Energy Markets is pleased to announce that Tristan Edis, who many will already know from his prior role as the Editor of Climate Spectator, will be joining the organisation as Director – Analysis and Advisory.

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VEEC Commercial lighting activity (Schedule 34) continues to grow rapidly, accounting for 33 per cent of total March certificate creation. The number of VEECs generated from this activity has more than doubled in the first quarter of 2016 (compared to last quarter of 2015).

*The spot price is for a minimum parcel size of 5000 created certificates.
Prices are compiled using the latest reported market data.

Market price history



Small-scale technology certificates
Data modelling for 2016 to 2018

Report to the Clean Energy Regulator

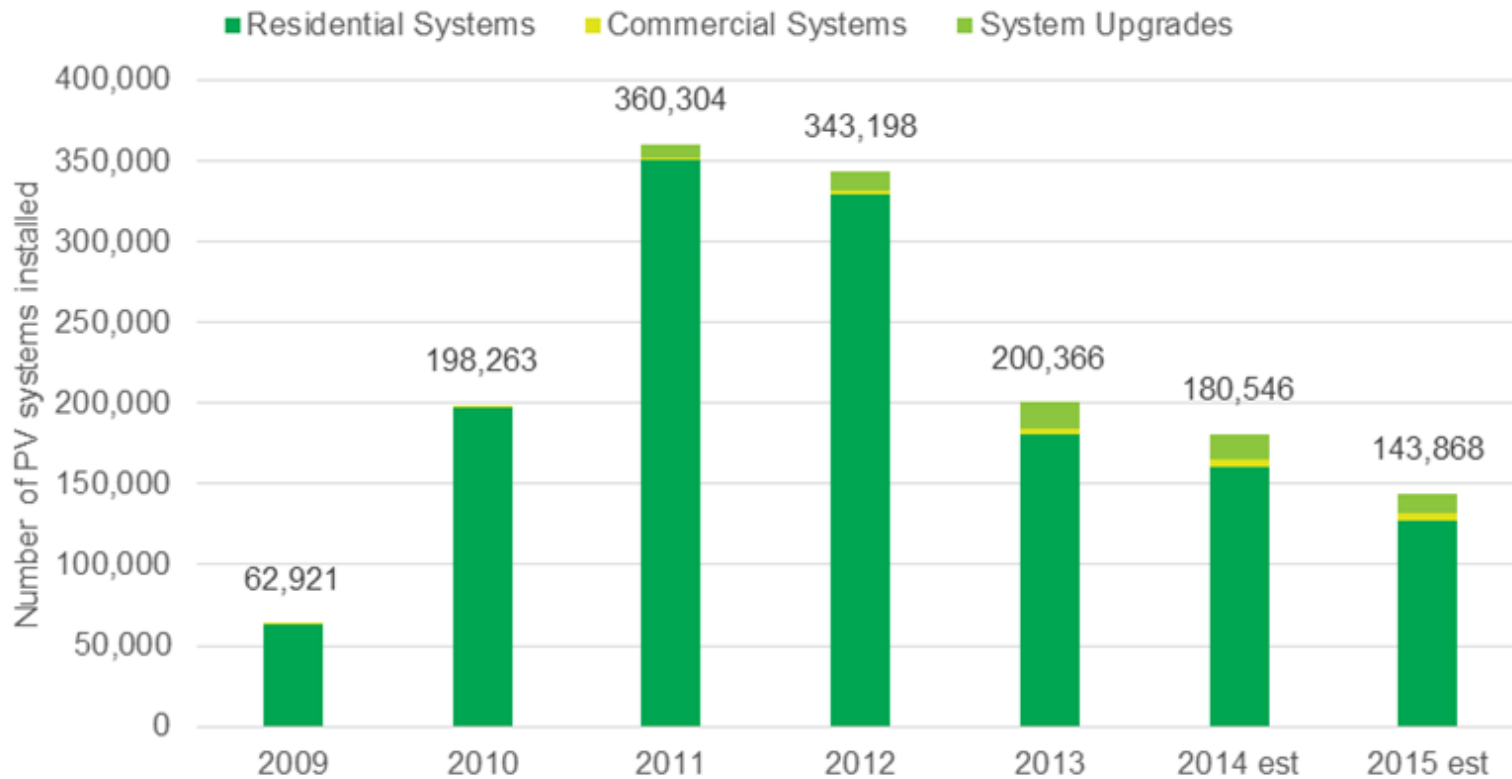
March 2016

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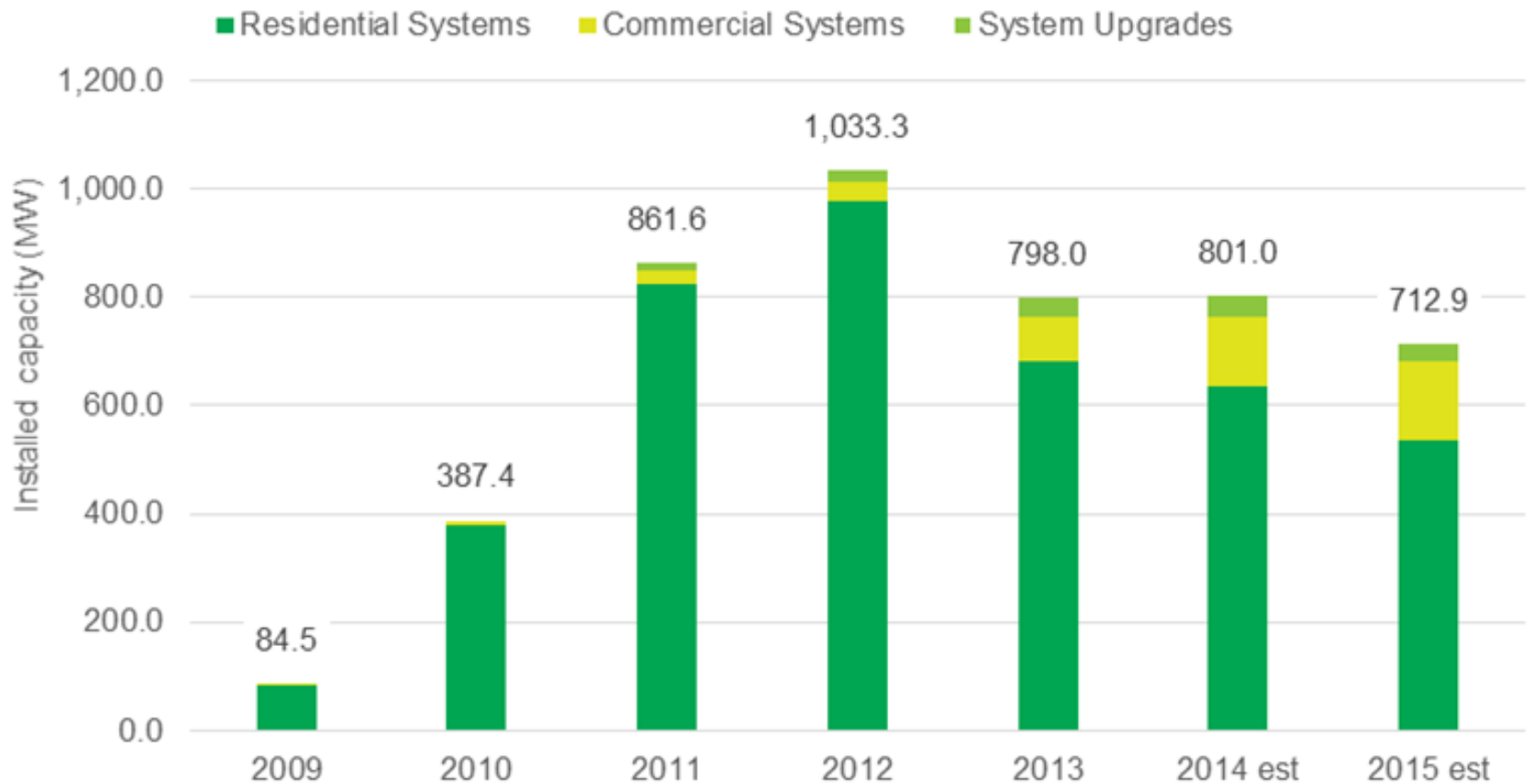
Number of PV systems installed has fallen dramatically

Number of systems installed is 60% less than 2011 peak



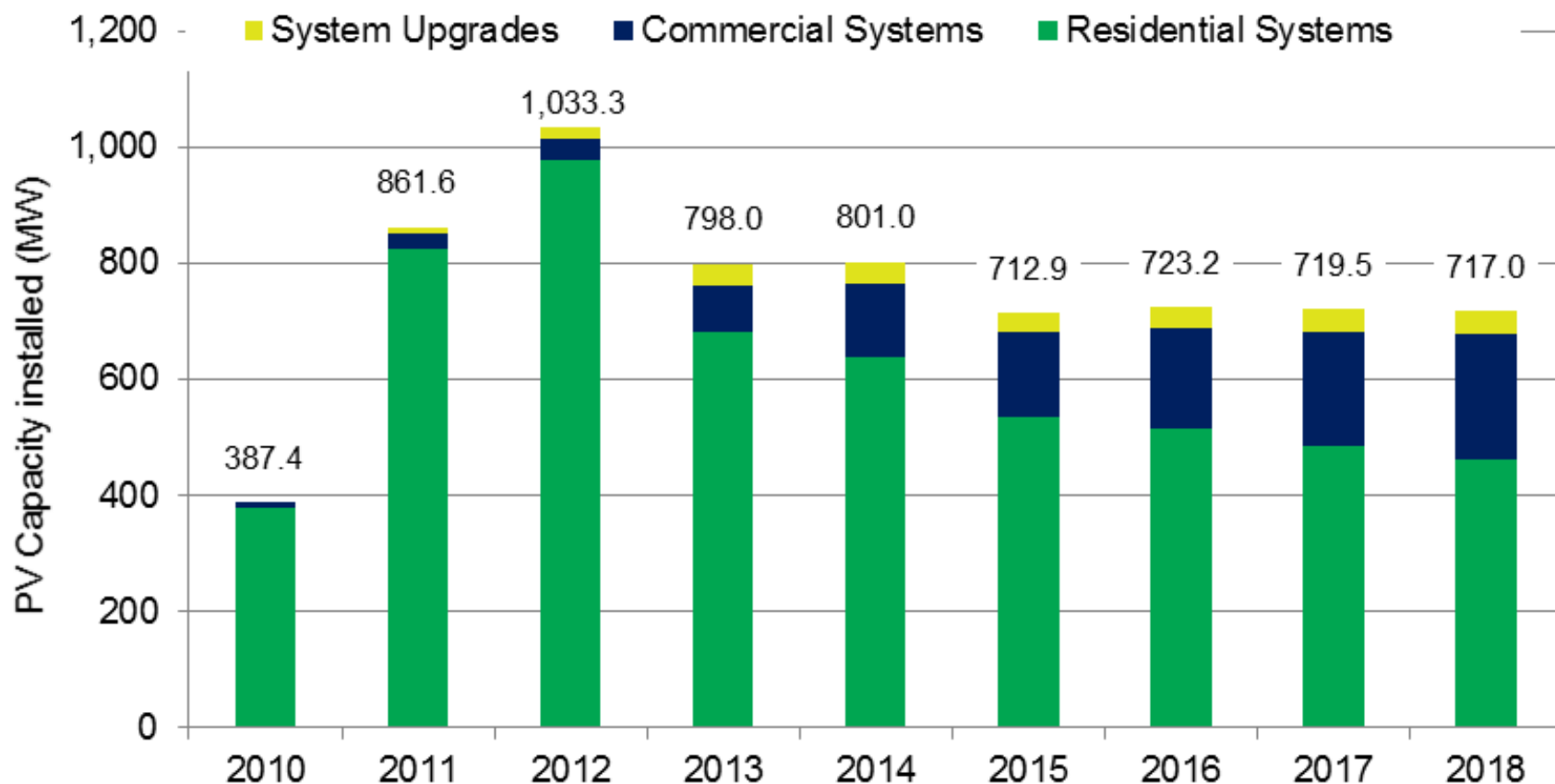
Capacity installed also materially lower

PV capacity installed is 31% less than 2011 peak



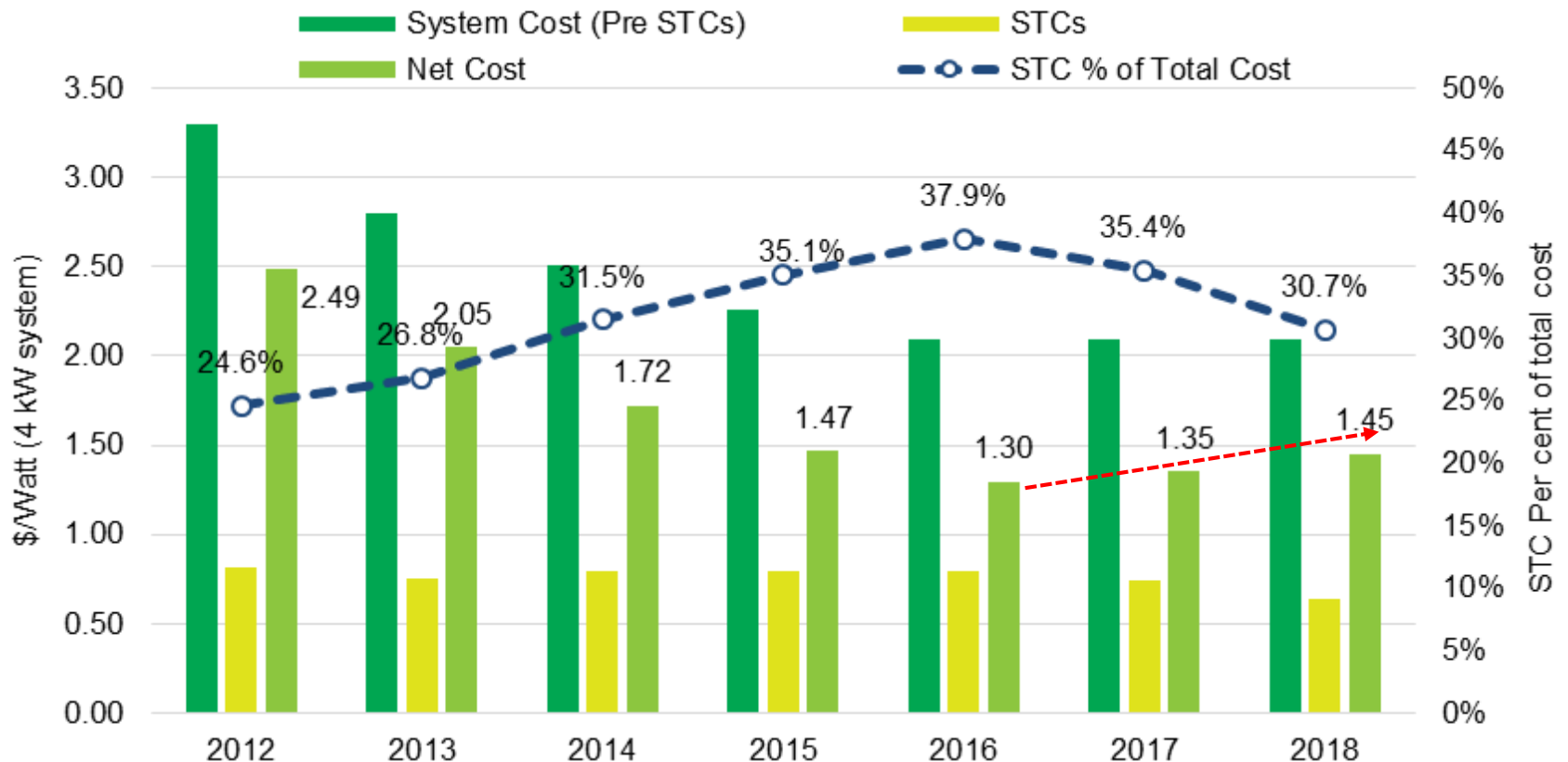
Capacity has levelled off

Expected that 2015 install level (715 MW) may have been sustainable
But – so far in 2016 we are tracking below this level



STC's have a material impact on PV system affordability – deeming falls away from 2017

Based on estimate of average 4 kW system cost across Australia



STC value reducing and variable power price avoided reducing making PV less attractive

- Not have deeming reduce as fast
 - extend the RET
- Solar PV for new homes
 - Changes to building codes (re SWH in Victoria)
- Overcome barriers to low income / rental market (is currently untapped)
 - Program through network businesses that also utilise state energy concessions for low income households

43 Solar Power stations accredited in 2015 (end Dec 2015)

Power stations accredited (as at 15 January 2016)						
Nominated person	Power station name	Accreditation code	Fuel Source	State	Accreditation date	Capacity (MW)
AAD Nominees Pty Ltd	Australian Antarctic Division HQ Solar	SRPVT02	Solar	TAS	7/10/2015	0.313
ACT Education and Training Directorate	Hedley Beare Centre for Teaching and Learning	SRPVAC09	Solar	ACT	17/12/2015	0.476
AGL	Broken Hill Solar Plant - NSW	SRPVNS36	Solar	NSW	22/07/2015	53.000
AGL	Nyngan Solar Plant - NSW	SRPVNS31	Solar	NSW	21/03/2015	102.000
Amaroo Solar Pty Ltd	Amaroo Solar - ACT	SRPVAC08	Solar	ACT	23/12/2015	0.600
Autonomous Energy Pty Ltd	Toyota Motor Corporation Australia Altona	SRPVVC22	Solar	VIC	2/09/2015	0.500
Bossong Engineering Pty Ltd	Bossong Welshpool - Solar - WA	SRPVWA18	Solar	WA	13/10/2015	0.180
COzero Pty Ltd	Sydney Theatre Company Solar - NSW	SRPVNS34	Solar	NSW	23/03/2015	0.380
Demand Manager Pty Ltd	Casuarina Square Solar PV System - NT	SRPVNT16	Solar	NT	19/10/2015	1.250
Demand Manager Pty Ltd	Murray Rose No5 - Solar - NSW	SRPVNS43	Solar	NSW	4/11/2015	0.130
Demand Manager Pty Ltd	Rouse Hill Town Centre -Solar -NSW	SRPVNS33	Solar	NSW	26/03/2015	0.350
Ekistica Pty Ltd trading as CAT Projects	Desert Knowledge Australia Solar Centre - NT	SRPVNT15	Solar	NT	12/08/2015	0.250
Green Energy Trading Pty Ltd	Ballarat Holden Solar - VIC	SRPVVC26	Solar	VIC	23/12/2015	0.140
Green Energy Trading Pty Ltd	CKB Oasis Recreation Centre Solar - WA	SRPVWA15	Solar	WA	16/01/2015	0.135
Green Energy Trading Pty Ltd	CKB Wastewater Treatment Plant Solar - WA	SRPVWA16	Solar	WA	16/01/2015	0.150
Green Energy Trading Pty Ltd	Cootamundra Oil Seed Solar - NSW	SRPVNS42	Solar	NSW	10/11/2015	0.468
Green Energy Trading Pty Ltd	Emmanuel College Administration - Solar - QLD	SRPVQL19	Solar	QLD	21/07/2015	0.100
Green Energy Trading Pty Ltd	IKEA Logan - Solar - QLD	SRPVQL18	Solar	QLD	14/05/2015	0.741
Green Energy Trading Pty Ltd	IKEA Marsden Park - Solar - NSW	SRPVNS37	Solar	NSW	16/07/2015	0.651
Green Energy Trading Pty Ltd	IKEA Richmond - Solar - VIC	SRPVVC21	Solar	VIC	17/04/2015	0.721
Green Energy Trading Pty Ltd	IKEA Springvale Solar - VIC	SRPVVC20	Solar	VIC	17/04/2015	0.950
Green Energy Trading Pty Ltd	Leeuwin Estate Solar - WA	SRPVWA19	Solar	WA	27/10/2015	0.149
Green Energy Trading Pty Ltd	Masalki Cool Stores Solar - VIC	SRPVVC25	Solar	VIC	16/12/2015	0.233
Green Energy Trading Pty Ltd	Sunny Crumpton Solar - QLD	SRPVQL21	Solar	QLD	2/11/2015	0.240
Lake Macquarie City Council	LMCC Administrative Centre – Solar – NSW	SRPVNS41	Solar	NSW	12/11/2015	0.170
Mater Dei	Mater Dei School Solar - NSW	SRPVNS45	Solar	NSW	8/12/2015	0.151
Peter Lehmann Wines Limited	Peter Lehmann Wines - Solar - SA	SRPVSA09	Solar	SA	18/02/2015	0.125
Regional Power Corporation	Yungngora Solar - WA	SRPVWA20	Solar	WA	17/12/2015	0.200
Sunlease Unit Trust No.1	Tyrrell's Ground Mount Solar - Pokolbin - NSW	SRPVNS40	Solar	NSW	24/11/2015	0.350
The Environment Shop	Complete Food Services Preston - Solar - VIC	SRPVVC23	Solar	VIC	31/08/2015	0.200
The University of Queensland	Gatton Solar Research Facility	SRPVQL22	Solar	QLD	20/11/2015	3.275
Todae Solar Pty Ltd	Brisbane Markets - Todae Solar PV - QLD	SRPVQL20	Solar	QLD	3/09/2015	1.060
Todae Solar Pty Ltd	Bupa Tamworth - Todae Solar PV - NSW	SRPVNS39	Solar	NSW	23/10/2015	0.100
Todae Solar Pty Ltd	Stockland Shellharbour - Todae Solar PV - NSW	SRPVNS38	Solar	NSW	3/09/2015	1.220
University of New South Wales	UNSW Library - Solar - NSW	SRPVNS35	Solar	NSW	7/05/2015	0.114
UNIVERSITY OF WOLLONGONG	University of Wollongong - SBRC - Solar - NSW	SRPVNS32	Solar	NSW	2/03/2015	0.160
Weipa Solar Farm Pty Ltd	Weipa Solar Farm - QLD	SRPVQL17	Solar	QLD	29/05/2015	1.700
Wesco Electrics (1966) Pty Ltd	Amcap Distribution Welshpool - Solar - WA	SRPVWA17	Solar	WA	18/08/2015	0.240
Woolworths Ltd	Woolworths Coolalinga – Solar – NT	SRPVNT17	Solar	NT	10/11/2015	0.320

39

Power Stations

164.803

Power station applications pending registration

Nominated person	Capacity (MW)
Origin Energy Electricity Limited	0.263
Green Energy Trading Pty Ltd	0.160
Green Energy Trading Pty Ltd	0.990
Freecor International Pty Limited	0.400

4

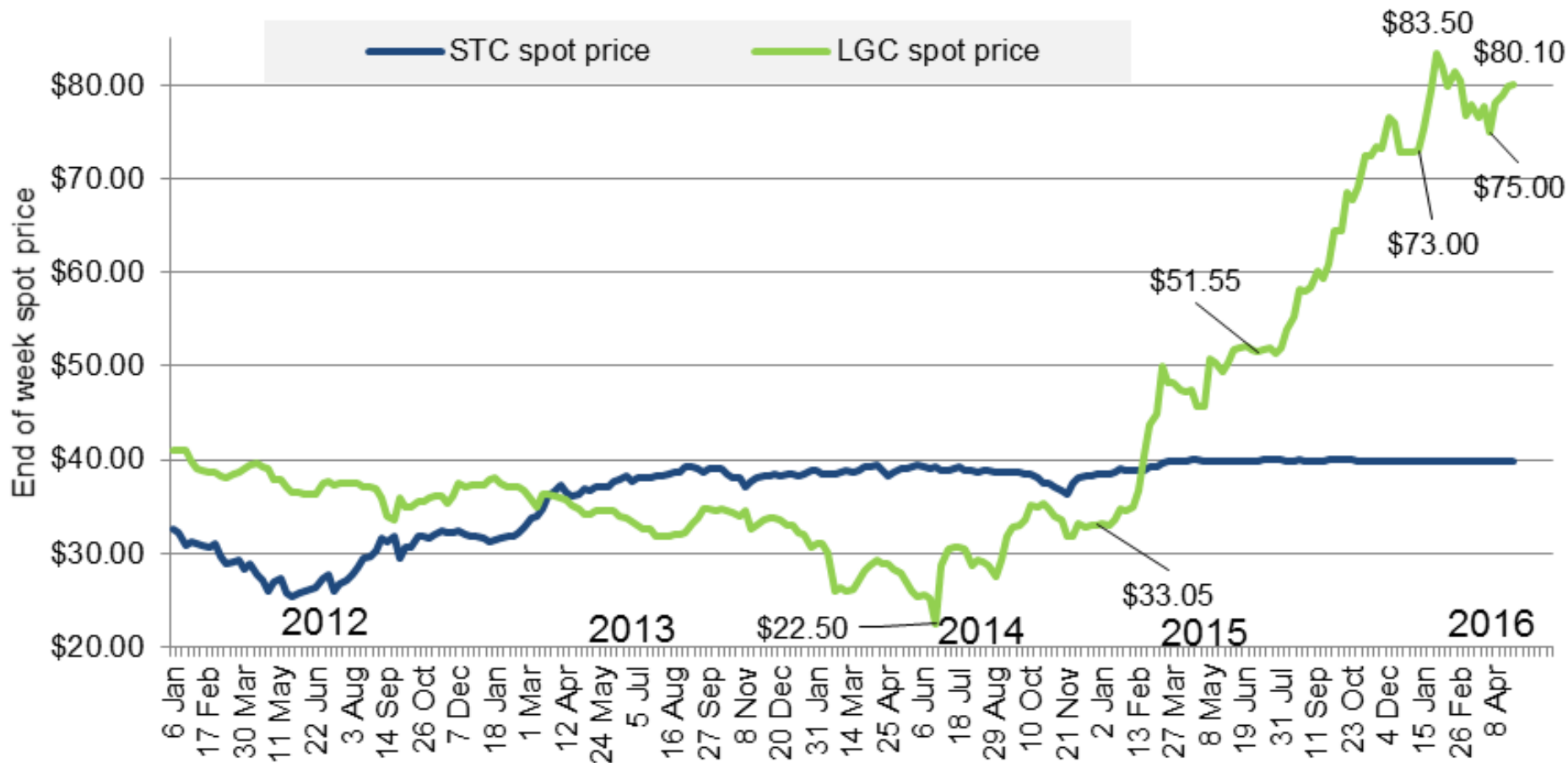
Power Stations

1.813

Considerable interest in large scale PV

- ARENA large-scale program (\$100m) – 22 Projects shortlisted with combined capacity of 766 MW – LCOE less than \$135/MWh (2 projects in Vic)
- Qld Govt – 60 MW large scale program
- Other programs – Ergon RFP /Vic Govt LGC procurement /Local Govt procurement
- We are not going to meet the 2018 LGC target and LGC price has increased dramatically

Spot LGC price over \$80



Contracting for LGC sales remains a problem

- Short term price is determined by the failure to meet the RET target and significant shortfall penalties made
 - But there is also risk of government intervention (where industry cant meet target)
- Longer term price is determined by the cost of new entrants
 - Key uncertainty is future electricity price (will have to close coal fired power stations to meet greenhouse targets)

GET will only contract out for four years (where we can get wholesale market cover)



- Renewables industry cannot afford any more tinkering with the RET
 - Need bi-partisan support else will never be able to raise capital to build capacity
 - If other schemes are introduced – need to compliment the RET, not provide an alternative to it (eg ACT Reverse Auction)
- Recycle any penalties paid back into the industry (can be material)
 - Supporting ARENA
 - Other programs – similar to ARENA large-scale solar program (supported new capacity)

- Small-scale market to continue to decline
- Policy support to focus on new markets / addressing barriers
- Large-scale solar market emerging in response to high LGC price
- Policy uncertainty (renewables/greenhouse) could continue to undermine investment

Thank you

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