Pushing Limits: Australia's Residential Solar PV Market to 2021

Confidential Update Briefing for Strategic Research Clients

ENERGEIA

1.0 Executive Summary

With market activity headed for levels not seen since 2009 in each of the major states other than QLD, the three key questions facing the Australian solar PV market are what the new, unsubsidised market will look like, how long the QLD premium FiT is likely to last, and how much residential solar PV can electricity distribution networks support before significant constraints emerge.

In this confidential Update Briefing for our Strategic Research Service clients, Energeia examines the key developments in the solar PV market and industry over the last 12 months and its current status. The report focuses on changes occurring since the last publication with regards to policy and regulation, customer segments and demand, products and services, industry and strategy, and their impact on our ten year outlook to 2021.

Previously, Energeia painted a picture of reductions in government support driving a 25% fall in solar PV system demand in 2011. However, the surprise accelerated withdrawal of the Federal Small-scale Technology Certificates (STC) multiplier in May 2011 brought significant demand forward into 2011. Nevertheless, Energeia's previous forecast of 343,000 installations over 2010 and 2011 has only been 4,000 units lower than actual results.

Since our Private Report was issued May 2010, Energeia has added South Australia to our market coverage, and improved our market model to provide a more accurate historical fit to available data. Our updated modelling shows the Australian residential solar PV market falling by 56% in 2012 and continuing to contract until 2013, when declines in system prices and rises in retail electricity prices will lead to a sustained period of 6% average growth.

Overall, Energeia is increasing its solar PV outlook relative to our 2010 report by 400,000 installations, and we now see Australia reaching a total of 1.5 million residential solar PV installations by 2021. This represents a total residential market penetration of 22% and an installed capacity of 2,700MW. By the end of the period, Energeia anticipates peaking solar PV output will lead to significantly lower mid-day NEM prices, offset somewhat by higher ancillary services costs to manage solar PV's intermittency.

Growth would be higher but for the expected network limitations, which we believe are already impacting installations in QLD and SA. Voltage regulation issues will begin to act as a significant barrier in these markets in the next 2-3 years if a significant response is not mounted by the network operators. Should renewable energy integration constraints be addressed, we see the market adding an additional 100,000 systems over the latter half of the forecast period in SA and QLD.

Government FiT policy will continue to be a major market driver over the medium term. Energeia believe QLD could maintain its FiT level indefinitely, but may choose not to in light of network costs, the change in government, and mounting Federal pressure to phase all state FiTs out in favour of the carbon price by 2015. VIC and SA's expected implementation of a standard FiT that is lower than the retail price is expected to focus demand on solar PV systems that minimise uneconomic exports.

The market's steep decline over the next few years will test the limits of the solar PV industry, and has already pushed two of the top ten players to the wall. Energeia's expects solar PV's growth to increasingly push the limits of electricity distribution networks, and distributors to be faced with the choice of restricting access to customers, soaring costs under a business as usual approach, or finding smarter ways to manage solar PV's impact.

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2.0 Introduction

This Update Briefing is an update to our Private Report on the Australian residential market for micro-renewable generation issued May 2011. It is meant to be understood alongside the foundational Private Report, but is designed to be able to be read on a standalone basis.

This Update Briefing is designed to inform our clients on the key policy, market and industry developments and changes occurring since the last report was issued, their impact on our outlook and the most important implications for stakeholders.

This update has been expanded to include the SA market, but is purely focused on the residential solar PV market, given its relative size and fast changing market and industry landscape.

We plan to provide a full microrenewables market update including microwind and solar hot water every two to three years, depending on the pace of developments in the solar hot water and microwind market sub-segments.

6.0 Glossary

This report uses the following abbreviations:

ACT	Australian Capital Territory
AMI	Advanced Metering Infrastructure
AUD	Australian Dollar
BIPV	Building Integrated Photovoltaic
CAGR	Compound Annual Growth Rate
c/kWh	Cents per Kilowatt Hour
FiT	Feed-in Tariff
GBP	Great Brittan Pound
GWh	Giga Watt hour
IPART	Independent Pricing and Regulatory Tribunal
IVVC	Integrated Volt/VAR Control
kW	Kilo Watt
kWh	Kilo Watt Hour
MW	Mega Watt
NSW	New South Wales
OTC	Over the Counter
ORER	Office of the Renewable Energy Regulator
PV	Photo Voltaic
QLD	Queensland
R^2	R-squared
REC	Renewable Energy Certificates
RET	Renewable Energy Target
SA	South Australia
STC	Small-scale Technology Certificate
TOU	Time of Use
VIC	Victoria

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