

PUBLIC RECORD



Australian Government
Department of Industry,
Innovation and Science

Anti-Dumping
Commission

CUSTOMS ACT 1901 - PART XVB

TERMINATION REPORT NO. 239A

**ALLEGED DUMPING OF CERTAIN CRYSTALLINE SILICON
PHOTOVOLTAIC MODULES OR PANELS**

EXPORTED FROM THE PEOPLE'S REPUBLIC OF CHINA

October 2016

TER 239A Certain Crystalline Silicon Photovoltaic Modules or Panels - China

PUBLIC RECORD

CONTENTS

CONTENTS	2
ABBREVIATIONS	4
1 SUMMARY AND FINDINGS.....	6
1.1 <i>Finding</i>	<i>6</i>
1.2 <i>Authority to make decision.....</i>	<i>6</i>
2 BACKGROUND TO THE RESUMED INVESTIGATION.....	7
2.1 <i>Initiation – Investigation 239.....</i>	<i>7</i>
2.2 <i>SEF 239.....</i>	<i>7</i>
2.3 <i>Termination Report 239.....</i>	<i>8</i>
2.4 <i>Review of TER 239 by the ADRP and revocation of the termination</i>	<i>8</i>
2.5 <i>SEF 239A.....</i>	<i>9</i>
3 ADRP’S FINDINGS IN RESPECT OF TER 239 AND THE COMMISSION’S APPROACH TO RESUMED INVESTIGATION	10
3.1 <i>ADRP’s findings.....</i>	<i>10</i>
3.2 <i>Approach to the resumed investigation</i>	<i>11</i>
4 SUBMISSIONS IN RESPONSE TO ADRP’S REVOCATION.....	15
4.1 <i>Submissions on matters raised by the ADRP</i>	<i>15</i>
4.2 <i>Other matters raised in submissions.....</i>	<i>22</i>
5 CAUSATION OF INJURY	31
5.1 <i>The Commission’s approach to causation of injury.....</i>	<i>31</i>
5.2 <i>Tindo’s end-user analysis before the ADRP</i>	<i>35</i>
5.3 <i>Coincidence analyses</i>	<i>38</i>
5.4 <i>Survey of end users by Colmar Brunton</i>	<i>42</i>
5.5 <i>Econometric analysis</i>	<i>45</i>
5.6 <i>Other factors</i>	<i>46</i>
5.7 <i>Attenuation of Tindo’s injury by product differentiation.....</i>	<i>46</i>
5.8 <i>Tindo’s but-for causation argument</i>	<i>46</i>
5.9 <i>Conclusion on causation.....</i>	<i>48</i>
6 SUBMISSIONS IN RESPONSE TO SEF 239A.....	49
6.1 <i>Loans at rates not reasonably representative of market costs.....</i>	<i>49</i>
6.2 <i>Corporate costs.....</i>	<i>51</i>
6.3 <i>Profit used in the normal value calculations</i>	<i>51</i>
6.4 <i>End user price undercutting.....</i>	<i>52</i>

PUBLIC RECORD

6.5	<i>Causation and causation factors</i>	54
6.6	<i>Assessing causal link: volume injury</i>	56
6.7	<i>Assessing causal link: price injury</i>	60
6.8	<i>But-for causation assessment and contract evidence</i>	60
6.9	<i>Colmar Brunton end-user survey</i>	62
6.10	<i>Tindo’s end-user survey</i>	63
6.11	<i>Evidentiary standard and relevance of the business plan prepared by EY for Tindo</i>	65
6.12	<i>Qualitative features and product differentiation</i>	67
6.13	<i>Public interest</i>	67
6.14	<i>Particular market situation</i>	68
7	FINDING	69

ABBREVIATIONS

\$ or AUD	Australian dollars
AC	Alternating current
the Act	the <i>Customs Act 1901</i>
ADA	World Trade Organization Anti-Dumping Agreement
ADN	Anti-Dumping Notice
ADRP	Anti-Dumping Review Panel
ADRP Report	ADRP Report No. 29
the applicant or Tindo	Tindo Manufacturing Pty Ltd
CCCME	Chinese Chamber of Commerce for Import and Export of Machinery and Electronic Products
China	The People's Republic of China
the Commission	the Anti-Dumping Commission
the Commissioner	the Commissioner of the Anti-Dumping Commission
CTMS	Cost to make and sell
DC	Direct current
EPR	The electronic public record for Investigation 239 at the Commission's website, adcommission.gov.au
ET Solar	ET Solar Energy Ltd; ET Solar Industry Ltd; and ET Energy Co. Ltd
GOC	Government of China
the goods	the goods the subject of the application (also referred to as the goods under consideration or GUC), in this case, certain crystalline photovoltaic modules or panels
Investigation period	1 July 2012 to 31 December 2013
PAD	Preliminary Affirmative Determination
the Manual	Dumping and Subsidy Manual (November 2015)
Ministerial Direction	<i>Ministerial Direction on Material Injury</i> (27 April 2012)
Parliamentary Secretary	the Assistant Minister for Industry, Innovation and Science and Parliamentary Secretary to the Minister for Industry, Innovation and Science
PV panels	Crystalline silicon photovoltaic modules or panels
the Regulation	<i>Customs (International Obligations) Regulation 2015</i>
Renesola	ReneSola Australia Pty Ltd; ReneSola Jiangsu Ltd; and ReneSola Zhejiang Ltd
SEF	Statement of Essential Facts
SEF 239	The Statement of Essential Facts No 239 published on 7 April 2015
SEF 239A	Statement of Essential Facts No. 239A published on 2 September 2016
SG&A	Selling, general and administrative expenses
TER 239	Termination Report No 239 dated 6 October 2015

PUBLIC RECORD

Tindo's application for review	Tindo's application to the ADRP dated 5 November 2015 for review of the Commissioner's decision to terminate Investigation 239
Trina	Changzhou Trina Solar Energy Co. Ltd; Trina Solar (Changzhou) Science and Technology Co. Ltd; Trina Solar Energy Development PTE Ltd; Trina Solar Energy (Shanghai) Co. Ltd; and Trina Solar (Australia) Pty Ltd
W	Watts

1 SUMMARY AND FINDINGS

This Termination Report No. 239A (TER 239A) sets out the reasons why the Commissioner of the Anti-Dumping Commission (the Commissioner) is satisfied that the injury to the Australian PV panel industry caused by dumped PV panels is negligible.

Investigation number 239A (Investigation 239A) is a resumed investigation into the alleged dumping of certain crystalline silicon photovoltaic modules or panels (PV panels) exported to Australia from the People's Republic of China (China). SEF 239A set out the facts on which the Commissioner proposed to terminate Investigation 239A.

The Anti-Dumping Commission (the Commission) published SEF 239A in response to a decision by the Anti-Dumping Review Panel (ADRP) on 22 December 2015 to revoke the Commissioner's decision of 6 October 2015 to terminate Investigation 239. The investigation formally resumed after publication of SEF 239A (see subsection 269ZZT(2) of the *Customs Act 1901* (the Act)).¹

1.1 Finding

The Commissioner finds and is satisfied that:

- the injury to the Australian industry that has been, or may be, caused by PV panels exported from China during the period 1 July 2012 to 31 December 2013 (the investigation period) at dumped prices is negligible.

Accordingly the Commissioner must terminate the resumed investigation under subsection 269TDA(13) of the Act.

1.2 Authority to make decision

The Commissioner either must make a recommendation to the Assistant Minister for Industry, Innovation and Science and Parliamentary Secretary to the Minister for Industry, Innovation and Science (the Parliamentary Secretary)² concerning whether a notice should be published in respect of the goods or, if satisfied of any of the reasons for termination in section 269TDA, must terminate the investigation. In making this decision the Commissioner has had regard to all relevant information including submissions received in response to SEF 239A.

¹ All legislative references in this report are references to the *Customs Act 1901* unless otherwise stated.

² On 19 July 2016, the Prime Minister appointed the Parliamentary Secretary to the Minister for Industry, Innovation and Science as the Assistant Minister for Industry, Innovation and Science. For the purposes of this decision the Assistant Minister is the Parliamentary Secretary to the Minister for Industry, Innovation and Science.

2 BACKGROUND TO THE RESUMED INVESTIGATION

2.1 Initiation – Investigation 239

On 4 February 2014, Tindo Manufacturing Pty Ltd (Tindo) lodged an application for the publication of a dumping duty notice in respect of PV panels exported to Australia from China. Tindo alleged that dumped PV panels exported to Australia from China had caused material injury to the Australian industry producing like goods.

Following consideration of the application, the Commissioner decided not to reject the application and the Commissioner initiated Investigation 239 by public notice in *The Australian* newspaper on 14 May 2014. Anti-Dumping Notice (ADN) No. 2014/38 provides further details of Investigation 239 and is available on the Commission's website at www.adcommission.gov.au.

The following periods are relevant to Investigation 239:

- the investigation period for the purpose of assessing dumping is 1 July 2012 to 31 December 2013; and
- the injury analysis period for the purpose of determining whether material injury has been caused to the Australian industry is from 1 January 2010.

The same periods are relevant to the resumed investigation.

2.2 SEF 239

The SEF for Investigation 239 (SEF 239) was placed on the public record on 7 April 2015.

The Commission received submissions from the following interested parties in response to SEF 239:

- ET Solar Energy Limited; ET Solar Industry Limited; and ET Energy Co. Limited (collectively referred to as ET Solar);
- Changzhou Trina Solar Energy Co. Ltd; Trina Solar (Changzhou) Science and Technology Co. Ltd; Trina Solar Energy Development PTE Ltd; Trina Solar Energy (Shanghai) Co. Ltd; and Trina Solar (Australia) Pty Ltd (collectively referred to as Trina);
- ReneSola Australia Pty Ltd; ReneSola Jiangsu Ltd; and ReneSola Zhejiang Ltd (collectively referred to as Renesola);
- the Clean Energy Council of Australia (CEC);
- Tindo;
- the State Government of South Australia; and
- the China Chamber of Commerce of Import and Export of Machinery and Electronic Products (CCCME).

Public record versions of these submissions can be found on the EPR, which is available on the Commission's website at www.adcommission.gov.au.

2.3 Termination Report 239

The Commissioner published Termination Report No. 239 (TER 239) on 6 October 2015 setting out its findings and conclusions into the alleged dumping of PV panels exported to Australia from China and the Commissioner's reasons for terminating Investigation 239.

In TER 239, the Commissioner was satisfied that:

- PV modules or panels exported to Australia from China during the investigation period were exported at dumped prices; but
- the injury to the Australian industry that has been, or may be, caused by those exports was negligible.

As a result of these findings, the Commissioner was obliged to terminate the investigation in accordance with subsection 269TDA(13) of the Act.

A notice regarding the termination of this investigation was published in *The Australian* newspaper on 6 October 2015. ADN No. 2015/118 also advises of the termination.

2.4 Review of TER 239 by the ADRP and revocation of the termination

On 5 November 2015, Tindo applied to the ADRP for a review of the Commissioner's termination decision. The ADRP accepted the application and conducted a review.

On 22 December 2015 the ADRP revoked the Commissioner's decision to terminate Investigation 239. The report outlining the ADRP's reasons for the revocation is available on the ADRP's website at www.adreviewpanel.gov.au. The ADRP's reasons for the revocation are summarised at section 3 of SEF 239A.

The Commission published ADN No. 2016/1 on 8 January 2016 advising interested parties of the ADRP's revocation and inviting submissions relevant to the resumed investigation.

The effect of the ADRP's revocation is that the Commissioner must, as soon as practicable after the ADRP's revocation, publish a further SEF (SEF 239A), in accordance with subsection 269ZZT(2). The investigation formally resumed following publication of SEF 239A.

The Commission received submissions from the following interested parties prior to publishing SEF 239A:

- Tindo;
- Trina;
- ReneSola;
- the CEC; and
- the CCCME.

2.5 SEF 239A

SEF 239A, which contains a number of preliminary findings, was placed on the public record on 2 September 2016. The Commission received submissions from the following interested parties in response to SEF 239A:

- Tindo;
- Trina;
- the CEC; and
- the CCCME.

Public record versions of these submissions can be found on the Commission's website at www.adcommission.gov.au.

3 ADRP'S FINDINGS IN RESPECT OF TER 239 AND THE COMMISSION'S APPROACH TO RESUMED INVESTIGATION

3.1 ADRP's findings

The following table summarises the ADRP's findings and reasons for the grounds of review for which the ADRP found in favour of Tindo, as set out in ADRP Report No. 29 (ADRP Report).

Ground of review	ADRP's finding and reasons
Level of trade	<p>The ADRP found for the applicant for the following reasons:</p> <ul style="list-style-type: none"> Some material indicated that the price advantage that the Chinese PV panels have at the wholesale level is not as great at the installed end-user level, which includes the price of an inverter. The Commission discounted this material in TER 239 (ADRP Report at [37]). <ul style="list-style-type: none"> TER 239 did not adequately explain why an analysis at the end-user level of trade could not be done (ADRP Report at [34]). A reliable analysis of the installed end-user market is required to be satisfied that the injury to the Australian industry was negligible (ADRP Report at [38]).
Market's preference for low-priced direct current (DC) Chinese product	<p>The ADRP found for the applicant, though only in part, for the following reasons:</p> <ul style="list-style-type: none"> The ADRP could not have regard to material put before it by the applicant that was not before the Commission. The ADRP did not accept the applicant's claim that the Commission wrongly proceeded on the basis that the applicant did not substantially offer DC solar panel systems to the market. The ADRP concluded nonetheless that the issue was whether, as Tindo alleged, the price advantage was from dumping or, as the Commission found, the contribution of dumping to this price advantage was negligible (ADRP Report at [47]).
Volume injury	<p>The ADRP found for the applicant for the following reasons:</p> <ul style="list-style-type: none"> The Commission's conclusion of no volume injury does not appear to take into account the extent to which a reduced price advantage for the Chinese imports may have influenced some customers to switch to Tindo's DC or alternating current (AC) product (ADRP Report at [55]). <ul style="list-style-type: none"> The conclusion does not have regard to any price premium or other advantage an Australian product may have over its imported product. The fact that the industry would still have suffered injury as a result of competition from the cheaper imported product does not mean that the injury would have been to the same extent as was suffered with dumping (ADRP Report at [56]). <ul style="list-style-type: none"> If there was a reduced price advantage for the imported Chinese product, Tindo could have obtained more sales than it did during the investigation period. This would have been an advantage to it in terms of increased revenue and reduced losses (ADRP Report at [57]). Without an analysis which explained why the Commission could so conclusively rule out this possibility, the Commission could not have been satisfied that the injury caused by the dumping was negligible (ADRP Report at [57]).

Ground of review	ADRP's finding and reasons
Tindo's business plan	<p>The ADRP found for the applicant for the following reasons:</p> <ul style="list-style-type: none"> • The Commission's conclusion seems to ignore the possibility that an increase in the price of the dumped imports sufficient to remove the dumping margin may have provided some amelioration of the injury being suffered by the Australian industry (ADRP Report[64]). <ul style="list-style-type: none"> ○ The Commission had no regard to the possibility that an increase in the price of the imported Chinese products to the extent of the dumping margins may have allowed some increase in the price of Tindo's products or an increase in sales (ADRP Report at [65]).
Qualitative features	<p>The ADRP found for the applicant for the following reasons:</p> <ul style="list-style-type: none"> • TER 239 does not show how the possibility could be ruled out that, if the price gap between the imported Chinese product and Tindo's was reduced, there could be an increase in the number of customers prepared to buy Tindo's product or that it may have been able to raise its price, given that some customers were prepared to pay a premium (ADRP Report at [70]).
Causal link	<p>The ADRP found for the applicant for the following reasons:</p> <ul style="list-style-type: none"> • The Commission did not carry out the non-attribution exercise (namely, not attributing injury to competition in the market, absent dumping) in a way that allows a finding to be made that the injury caused by the dumped exports was negligible (ADRP Report at [74]-[75]). • The Commission's conclusion based on the pricing analysis simply assumed that because there would still be a price advantage with the dumped exports, any injury from those exports must have been negligible (ADRP Report at [75]). • Further analysis by the Commission should at least include further examination of the competition in the end-user market and an examination of the possibility that a reduction in the price gap between the imported Chinese products and Tindo's products may have reduced the extent of the injury being suffered (ADRP Report at [75]).

3.2 Approach to the resumed investigation

In light of the ADRP's decision, the Commission has reviewed the submissions, conducted further analysis and examined the findings and determinations made during Investigation 239. These matters are discussed throughout this report.

The Commission received submissions from interested parties following revocation of the Commissioner's termination decision (ADN 2016/01 refers). The submissions generally address the issues that the ADRP identified as warranting further consideration. A complete listing of the submissions considered in preparation of SEF 239A can be found in chapter 4 of this report.

The Commission has approached the issues raised by the ADRP and considered them in this resumed investigation as outlined below.

3.2.1 Level of Trade

The Commission has reviewed Tindo's claims that the removal of a 21.1 per cent dumping margin would make Tindo's offering to end users competitive. In doing so, the Commission found a mathematical error in Tindo's submission to the ADRP. The

Commission has corrected for that mathematical error in making its findings in this report. Details of the mathematical error and the Commission's corrections are contained in section 5.2.

In addition, the Commission commissioned Colmar Brunton to undertake a survey and analysis of the installed end-user market for PV panels. The Colmar Brunton analysis has found that end users are price sensitive and an increase in the price of installed Chinese PV panels of the magnitude likely to arise from imposing dumping duties would have little impact on the volumes of Australian PV panels. This finding is notwithstanding that many end users prefer Australian PV panels. The work by Colmar Brunton is further described in section 5.4 and Colmar Brunton's report is contained at non-confidential Attachment 1.

3.2.2 Market's preference for low priced DC Chinese product

The Commission has investigated whether, as Tindo alleges, the significant price advantage held by Chinese PV panels was from dumping or, as the Commission originally found, the contribution of dumping to this price advantage was negligible.

In making this investigation the Commission has corrected for the mathematical error made by Tindo before the ADRP in claiming that the significant price advantage held by Chinese PV panels was from dumping. Details of the Commission's findings in this respect are contained at section 5.2.

The Colmar Brunton survey and analysis assessed the preferences of end users in the market in terms of price and other product characteristics. The results of the Colmar Brunton analysis are described in section 5.4.

3.2.3 Volume injury

The Commission has taken into account the extent to which a reduced price advantage for Chinese imports may have influenced some customers to switch to Tindo's products.

The Commission asked Colmar Brunton to assess whether, if there was a reduced price advantage for imported Chinese PV panels, Tindo could have obtained more sales than it did during the investigation period. The results of the Colmar Brunton analysis are described in section 5.4.

The Commission also assessed whether any volume injury was caused to Tindo by means of month-by-month coincidence analyses. The results of these analyses are described in section 5.3.1.

3.2.4 Tindo's business plan

The Commission asked Colmar Brunton to assess the extent to which an increase in the price of dumped PV panels, sufficient to remove the dumping margin, would provide some amelioration of any injury suffered by the Australian industry. Colmar Brunton found that an increase in the price of dumped PV panels, sufficient to remove the dumping margin, would have little or no effect on the Australian industry. Further details of the results of the Colmar Brunton analysis are described in section 5.4.

The Commission also assessed Tindo's business plan as a basis for demonstrating that, but for imports of Chinese PV panels, Tindo's business would be materially better off. The Commission's assessment of Tindo's business plan is at section 5.8.

3.2.5 Qualitative features

The Commission asked Colmar Brunton to assess the extent to which, if the price gap between Chinese PV panels and Tindo's was reduced, there would be an increase in the number of customers prepared to buy Tindo's product. Such an increase in demand may have enabled Tindo to raise its prices, given that some customers seem prepared to pay a premium. Colmar Brunton found that there would be little or no increase in demand for Tindo's product in response to an increase in the price of Chinese PV panels arising from the imposition of dumping duties. While Tindo's customers may be prepared to pay a premium, Colmar Brunton found that purchasers of Chinese PV panels would tend to switch to the next cheapest offering (rather than Australian PV panels) in the event that Chinese PV panels increased in price. Further details of the results of the Colmar Brunton analysis are described in section 5.4.

The Commission also assessed information concerning qualitative features of Tindo's PV panels that have the effect of significantly differentiating Tindo's PV panels from other PV panels in the market. The Commission's assessment is at section 5.7.

3.2.6 Causal link

The Commission has undertaken a further examination of competition in the end-user PV panels market and an examination of the extent to which a reduction in the price gap between Chinese PV panels and Tindo's PV panels may have reduced the extent of the injury being suffered. The work by Colmar Brunton modelled the extent to which a reduction in the price gap between Chinese PV panels and Tindo's PV panels may have reduced the extent of the injury being suffered by Tindo.

The Commission considers that the Colmar Brunton work expressly modelled the extent to which the effect of the price difference should, and should not, be attributed to dumping. In particular, Colmar Brunton modelled the scenario in which Chinese PV panels increased in price to some extent (as would happen if dumping duties were imposed) but that Chinese PV panels remained significantly cheaper than Tindo's PV panels. This non-attribution exercise is directed to assessing the extent of the injury caused by dumped PV panels.

The Commission's examination of competition in the PV panels market and the assessment of any causal link between injury and dumped PV panels has not proceeded merely on the basis that because there would still be a price advantage with the dumped exports, any injury from those exports must necessarily have been negligible.

Relevant details of the results of the Colmar Brunton analysis are described in section 5.4.

3.2.7 Other matters

The Commission will also address other matters raised in submissions by interested parties.

For matters that the ADRP has not identified for reconsideration or for which the Commission found no evidence to change the findings made or approaches taken in TER 239, the Commission has taken such findings or approaches as remaining valid for this report.

Specifically, the following sections of TER 239 should be read in conjunction with this report and none of the findings in these chapters have changed as a result of the resumed investigation:

- Section 3 (The goods under consideration);
- Section 4 (The Australian industry);
- Section 5 (The Australian market);
- Section 6 (Dumping investigation);
- Section 7 (Economic condition of the industry).

4 SUBMISSIONS IN RESPONSE TO ADRP'S REVOCATION

Following the ADRP's revocation of the Commissioner's termination decision, the Commission sought submissions from interested parties regarding the ADRP's report.

The Commission received submissions from the following interested parties:

Party	Date submission received	EPR reference	Referred to hereafter as
CEC	26 February 2016	EPR document 168	Submission 168
CCCME	26 February 2016	EPR document 167	Submission 167
ReneSola	8 March 2016	EPR document 169	Submission 169
Tindo	12 February 2016	EPR document 162	Submission 162
	12 February 2016	EPR document 163	Submission 163
	12 February 2016	EPR document 164	Submission 164
	1 March 2016	EPR document 170	Submission 170
	8 March 2016	EPR document 171	Submission 171
	8 March 2016	EPR document 172	Submission 172
	2 June 2016	EPR document 174	Submission 174
Trina	20 January 2016	EPR document 159	Submission 159
	5 February 2016	EPR document 160	Submission 160
	5 February 2016	EPR document 161	Submission 161
	24 February 2016	EPR document 165	Submission 165
	25 February 2016	EPR document 166	Submission 166

Public record versions of these submissions can be found on the EPR.

4.1 Submissions on matters raised by the ADRP

4.1.1 Level of trade

4.1.1.1 Tindo

In Submission 163 Tindo made the following claims concerning the level of trade:

- The ADRP was correct that an analysis of the end-user level of trade is required because by the end of the investigation period the majority of Tindo's sales were to end users.

- The level of trade used by the Commission in TER 239 to analyse sales of imported Chinese PV panels at the wholesale level is not the same as almost all sales by Tindo. Dumping has been “deeply injurious” because in the absence of dumping, Tindo's price to end users would be the same or less than the price of a Chinese PV panel.

4.1.1.2 Trina

In Submission 160 Trina submitted that it is not appropriate to make comparisons at the end-user level. It is not appropriate because installed end-user level PV panels include components that are not PV panels such as inverters, mountings, interconnect cables and installation costs. Trina and other exporters have no control over the cost of these components. Trina submitted that it would be more reasonable to take Tindo costs and construct a wholesale price. Trina observed that comparing prices at end-user level is not a comparison of products that are like to the goods under investigation.

Trina reiterated these same points in Submission 166.

4.1.1.3 Clean Energy Council

In Submission 168 the CEC submitted that the Commission should reject the ADRP's recommendation that extended analysis should be conducted on the installed end-user market. The CEC stated that it would be inappropriate to compare prices of imported PV panels with Tindo's prices at the installed end-user level because:

- Exporters who sell to distributors and retailers have no control over the additional costs involved in installed end-user sales.
- Sales at the end-user level include the costs of inverters, mounting, cables and installation.
- Comparison of prices at the end-user level would include the cost of products that are not 'like goods' to the imports under investigation and prices for those products are not generally under the control of the importers.

The CEC considered it unclear how an analysis of the end-user market relevant to the case might be undertaken given the variety and rapid evolution of business models targeting the end-user market.

4.1.1.4 The Commission's assessment

As described below at section 5.2, there is a flaw in the basis for Tindo's claim that in the absence of dumping, Tindo's price at the end-user level of trade would be the same or less than the price for Chinese PV panels. The flaw is that the percentages compared by Tindo are percentages of different numbers and it would be a mathematical error to compare them without first correcting for that. After correcting for that mathematical error, Chinese PV panels at the end-user level of trade would remain at a significant price advantage to Tindo's PV panels.

Notwithstanding that finding, in accordance with guidance from the ADRP in its reasons for revoking the termination, the Commission has further considered the end-user level of trade for PV panels. This has included commissioning an end-user survey conducted by Colmar Brunton, which found, among other things, that Australian PV panels would be highly unresponsive to changes in price of Chinese PV panels and a small increase in the installed price of Chinese PV panels would not induce significant

switching to Australian PV panels. The key findings from the Colmar Brunton report are set out in section 5.4 below.

4.1.2 Market preference for low-priced DC Chinese product

4.1.2.1 Tindo

In Submission 163 Tindo claimed that the reason why the market chose Chinese PV panels is because they are cheap and that they are cheap because they are dumped. The Commission needs to consider whether dumping is assisting the sale of Chinese PV panels in the Australian market and Tindo considers that it could compete against undumped Chinese imports. Tindo claimed that it bid against imported PV panels and lost, and its analysis showed it would have won that bid if not for dumping.

4.1.2.2 Trina

In Submission 160 Trina observed that, in its experience, the market for PV panels is price sensitive. Trina submitted that the Commission's finding that the amount by which Tindo's prices of comparable products significantly exceeded the dumping margins calculated must lead to a conclusion that factors other than dumping provided a significant price advantage to imports. Therefore if imported PV panels were not dumped they would still have been considerably lower priced than Tindo's comparable products and preferred by the price sensitive market.

Trina considers that the main factor why Chinese PV panels have a significant price advantage is because of cost advantages arising from economies of scale.

4.1.2.3 The Commission's assessment

The contribution of dumping to the price difference at the end-user level is significantly less than claimed by Tindo. Tindo's view that it could compete against undumped Chinese imports on the basis of Tindo losing its bid against imported PV panels cannot be relied upon. Tindo's analysis showing it would have won that bid if not for dumping is flawed by Tindo's failure to adjust the dumping margin and price undercutting to the same level of trade. This failure is described in detail in section 5.2 below.

Trina's view is that Chinese PV panels have a significant price advantage because of cost advantages from economies of scale. The existence of economies of scale in production of PV panels appears to have support from Tindo. Tindo states at paragraph 15 of Submission 163 that it has the ability to continue to reduce its prices with increasing volumes.

4.1.3 Volume injury

4.1.3.1 Tindo

In Submission 163 Tindo claimed, as evidence of a causal link to volume injury, that the market size during the investigation period was big enough to absorb all of Tindo's planned production.

Tindo noted the significant difference between its planned production and actual production.

4.1.3.2 Trina

In Submission 160 Trina made the following claims:

- Tindo did not suffer volume injury and the Commission found that Tindo's sales volume actually increased during the investigation period. It was factors other than dumping which prevented Tindo from achieving its forecast sales volume of PV panels during the investigation period. These factors included:
 - Market decline in the demand for PV panels (not forecasted by Tindo) following Tindo's entry into the market.
 - Global reduction in production costs of PV panels causing significant price reductions of PV panels during the investigation period.
 - Even in the absence of dumping (ie, exports at undumped prices) PV panels from China would still have significantly undercut Tindo's selling prices.
 - Tindo could not compete without losing sales to suppliers who had a genuine cost advantage even at undumped prices.

4.1.3.3 The Commission's assessment

Tindo claims that the market size during the investigation period was big enough to absorb all of Tindo's planned production, however the connection of this to Tindo's claims concerning causal link to volume injury is unclear.

The Commission's coincidence analysis at section 5.3 shows that the effect of imported volumes of Chinese PV panels is inconsistent with, or does not support, claims concerning injury to Tindo's volumes. Instead, Tindo's claim to volume injury appears to rely on a but-for argument, using its business plan as a counterfactual. However the Commission does not consider that Tindo's business plan provides a sound basis for that argument. Tindo's but for argument is assessed in further detail below in section 5.8.

4.1.4 **Tindo's business plan**

4.1.4.1 Tindo

In Submission 163 Tindo claims that it had to reduce prices to a greater degree than was planned for in its business plan. Tindo nonetheless noted its ability to decrease its prices with increasing volumes.

Tindo claims that its price at end-user level was stated in the SEF to be similar to the level of dumping in TER 239 so, even not accounting for Tindo's premium for quality, Tindo would easily have sold its planned production.

4.1.4.2 Trina

In Submission 160 Trina reasserted its view that the Australian market is price sensitive and even in the absence of dumping Tindo would have to sell at a loss to compete on price with Chinese imports. If prices of imports were increased to remove the dumping margin they would still enter the price sensitive market at prices well below Tindo's prices, such that Tindo would still have to sell at injurious prices to compete.

4.1.4.3 CCCME

In Submission 167 the CCCME claimed that Tindo's business plan was a primary cause of Tindo's injury. The business plan:

- focussed on selling AC PV panels (which turned out to be less popular than DC);
- failed to forecast the decline in the market due to phasing out of feed-in tariffs; and
- underestimated the ability of Chinese exporters to reduce prices (even absent dumping) as the market became more competitive.

4.1.4.4 The Commission's assessment

The Commission considers that Tindo's business plan was found wanting in a number of respects, in particular for failing to foresee a downturn that resulted shortly after Tindo entered the market.

Tindo seeks to rely on its business plan as a counterfactual, however the Commission considers the business plan to be unreliable for this purpose. Tindo's business plan and the 'but for' approach to injury that Tindo relies on is addressed below in section 5.8.

4.1.5 **Qualitative features**

4.1.5.1 Tindo

In Submission 163 Tindo claims that the market is prepared to pay more for a Tindo PV panel than a Chinese PV panel, and for higher quality Chinese PV panels. Tindo claims that its product is a premium product. Tindo detailed a number of aspects in which its product is superior to imported Chinese PV panels. Tindo stated that it could reduce the cost and hence price of its product (by decreasing quality) to get closer to the cost and price of imports, but is not prepared to do so.

In Submission 174 Tindo stated that both Tindo's DC and AC products are 'premium' products. Tindo uses high quality components and processes to produce both its AC and DC products, including:

- laminating solar panels for 19 minutes to maximise the gel content of the ethylene-vinyl acetate (EVA) film;
- the use of Bridgestone EVA film (rather than a cheaper Chinese EVA film);
- the use of silicone (rather than a double-sided tape to frame the module);
- the use of Dow Corning PV-804 Neutral Sealant (rather than a Chinese equivalent edge seal and silicone);
- the use of DuPont Tedlar brand polyvinyl fluoride film (rather than a polyethylene terephthalate (PET) backing sheet from a Chinese company);
- 100% electroluminescence testing of panels; and
- a German aluminium junction box (rather than a Chinese plastic junction box).

Tindo's experience is that the Australian consumer will pay for its higher priced AC product. Tindo stated that there are three tiers of suppliers in the Australian market with higher prices being obtained by Tier 1 suppliers such as Tindo and some Chinese suppliers.

4.1.5.2 Trina

In Submission 160 Trina claimed that the issue is not that Tindo's price premium is too high, but that the Australian market is highly price sensitive.

4.1.5.3 The Commission's assessment

The Commission notes the significant amount of new information provided to it by Tindo concerning the high quality of its products. The Commission's view is that Tindo's product may be of such quality that, while still regarded as a like good to Chinese PV panels, it is differentiated to a significant degree. This significant degree of differentiation has likely insulated Tindo from direct and injurious competition from Chinese PV panels. The effect of this product differentiation is discussed in further detail in section 5.7 below.

The effect of this product differentiation would be in addition to the very limited responsiveness of Australian PV panels to the price of Chinese PV panels that was found by Colmar Brunton. Findings from the Colmar Brunton report, which addresses how Australian and imported products are regarded in the market in terms of quality, are set out in section 5.4 below.

4.1.6 Causal link

4.1.6.1 Tindo

In Submission 163 Tindo claims that contractions in general demand were not a factor because of Tindo's size in comparison to the rest of the market.

In Submission 164 Tindo revised its analysis of what it claimed was material injury that was causally linked to dumping. The revised analysis was based on dumping margins found in TER 239. Tindo sought to calculate the quantum of injury to Tindo from six tender transactions where it competed with tenders from installers of Chinese PV panels. Tindo then sought to extrapolate the results from this analysis more broadly to apply to respondents to a Tindo consumer survey. Tindo claims that these analyses support its claims of material injury to it from dumping.

In Submission 174 Tindo pointed to an unexpected steep decline in Chinese prices from mid-2011 to 2012. Tindo presented a graph that it claimed shows correlation between declining spot prices for PV cells and Tindo's PV panel prices.

However, Tindo also stated that any correlations would be 'statistically irrelevant' because of the difference in market shares between Tindo and Chinese imports.

4.1.6.2 Trina

In Submission 160 Trina argued that it is reasonable to conclude that, absent dumping, Chinese PV panels would have had such a price advantage that Tindo would still have suffered material injury. It follows that material injury suffered by Tindo was due to factors other than dumping and the injury caused by dumping was negligible.

Trina also argued that correcting Trina's 'highly inflated' dumping margin would reinforce a finding that injury was due to other factors.

4.1.6.3 CCCME

In Submission 167 the CCCME argued that if, as the Commission found in TER 239, the prices of Chinese PV panels including a dumping duty remained significantly below Tindo's prices then the natural conclusion is that Tindo would have gained no or only a very small number of additional sales from dumping duties being imposed.

The CCCME noted that subsection 269TDA(13) requires the Commissioner to be positively satisfied that dumped imports are causing only 'negligible injury' for the investigation to be terminated. But anti-dumping measures may be imposed only if the Minister is positively satisfied that imports at dumped prices are causing 'material injury' (see subsections 269TG(1) and 269TG(2)). The CCCME claims that even if the Commissioner does not have the requisite positive satisfaction concerning a lack of injury to terminate the investigation, there will be insufficient basis for the Minister to be positively satisfied that imports at dumped prices are causing material injury. The CCCME submitted that on the basis of the facts found by the Commission, it is very difficult to see how the Commission could conclude that any injury caused to Tindo by dumped exports from China was 'material'.

4.1.6.4 The Commission's assessment

Response to Submission 163

In response to Tindo's Submission 163, the Commission considers that general contractions in demand are likely to affect all suppliers to some extent. It is clear from the Commission's coincidence analysis in section 5.3 below that, early in the investigation period, sales volumes for Tindo and Chinese imports were positively correlated, suggesting they were responding to general movements in demand (a negative correlation would be expected if there was injury being caused to Tindo by imported volumes of PV panels).

Response to Submission 164

The Commission found significant errors in Tindo's Submission 164 that call the reliability of Tindo's analysis into question.

Firstly, Tindo's calculation of prices of undumped Chinese PV panels adds different units (dollars and watts).

Secondly, and more fundamentally, Tindo proceeds on the erroneous basis that dumping duties would be applied to end-user prices of an installed solar panel system when dumping duties would only apply to one component of an installed system and not others. This is discussed further at section 5.2 concerning Tindo's end-user analysis.

The second part of Tindo's analysis depends on the first (flawed) analysis³ and so conclusions drawn from the second part of Tindo's analysis will also be unreliable. Tindo appears to rely primarily on this analysis in Submission 164 for its causation argument.⁴

Response to Submission 174

The correlation claimed by Tindo in its Submission 174 is unclear. Chinese prices for PV cells started declining at least as early as early 2011 (which was well before Tindo started in business) and reached their nadir not long after Tindo commenced operations. In any event PV cells are not the goods under consideration and accordingly it is not clear how the prices for Chinese PV cells are relevant.

If any correlations are “statistically irrelevant”, as claimed by Tindo, then it is unclear how Tindo proposes that causation might be demonstrated to convince the Commissioner of causation, other than through its but-for argument.

Response to Submission 167

The Commission notes the CCCME's view that there may be insufficient grounds for the Parliamentary Secretary to be positively satisfied that dumped prices are causing material injury to Tindo, particularly in light of Tindo's increasing sales in 2013, 2014 and 2015.

4.2 Other matters raised in submissions

4.2.1 Export prices, normal values and dumping margins

4.2.1.1 Tindo

In Submission 171 Tindo disagreed with the Commission's approach to corporate costs in the constructed normal values used in TER 239. Tindo expressed concern that if the Commission limits its cost allocations to certain legal entities within a conglomerate without investigating the relevant costs within other entities of the conglomerate, the Commission would be omitting from its analysis relevant depreciation or interest on loans sitting in the accounts of another entity within the group. Allocations of depreciation, capital expenditure and other development costs from the parent and relevant subsidiary accounts should be included in the construction of normal value for the selected exporters.

4.2.1.2 Trina

In Submission 159 Trina claimed that the Commission had made errors in determining Trina's normal value and its export price.

Trina considers that there are two major issues with the Commission's approach to determining Trina's normal value:

³ See Submission 164, page 5.

⁴ See Submission 174, page 19.

- consideration that Trina's costs don't reasonably reflect competitive market costs; and
- the use of domestically purchased PV cells as surrogate costs for Trina's self-produced PV cells.

Trina submitted that the Commission should have determined constructed normal values using the proportion of Trina's PV cells that were self-produced and manufactured using imported polysilicon (which would reflect a competitive market cost).

Trina claims that in calculating the export price for Trina, the Commission used quarterly weighted average export prices rather than the weighted average export prices it calculated under subsection 269T(5A) of the Act. Using quarterly weighted average export prices increased PV panel export sales and inflated Trina's dumping margin.

Trina recalculated its dumping margin using the normal value and export price that corrected the errors claimed by Trina.

In Submission 160 Trina claimed that errors in the Commission's calculation of Trina's dumping margin had resulted in an inflated weighted average dumping margin for Chinese exports generally. On that basis the Commission's correction of the weighted average dumping margin should negate the ADRP's decision to revoke the Commission's termination.

4.2.1.3 Renesola

In Submission 169 Renesola claims there are errors in the Commission's revised dumping margin calculation methodology. The claimed errors are that the Commission double counted certain PV cells and that the Commission did not account for Renesola's preferred costing method for different grades of PV cells. Accounting for these errors would reduce Renesola's dumping margin.

Double counting costs

Renesola claims that in substituting a benchmark price for PV cell costs into Renesola's CTMS, the Commission did not accurately account for the cost of certain PV cells and hence double-counted the cost of those cells. Renesola submitted alternative calculations.

Commission did not account for Renesola's treatment of different grades

Renesola claims that it uses a particular method for costing PV cells with different grades. The Commission, in its revised dumping margin calculations, substituted the benchmark price of PV cells regardless of the grade. Renesola claims this is incorrect and adjusted the Commission's dumping margin calculation using its preferred methodology for PV cells of different grades.

4.2.1.4 CEC

The CEC made some general comments noting that some PV panel exporters had disputed the Commission's assessment of their dumping margins.

4.2.1.5 The Commission's assessment

Trina's dumping margin

To the extent that Trina is arguing against the use of domestically purchased PV cells as surrogate costs for Trina's self-produced PV cells, Trina is incorrect. The Commission did not use domestically purchased PV cells as surrogate costs for Trina's self-produced PV cells, but rather used an external benchmark as described in detail in Appendix 3 of TER 239.

To the extent that Trina argues that provision should be made for the costs of inputs to PV cells that are bought on world markets (and therefore reasonably reflect competitive market costs) the Commission refers to its practice in Report No. 300 (REP 300) (and elsewhere).⁵ In REP 300 the Commission found that government influences in the relevant industry were wide-ranging and not limited to the most significant raw inputs. In that circumstance the Commission will use an external benchmark.⁶ For PV panels the Commission found that there was significant Government of China (GOC) intervention at all levels of the PV industry.⁷ In addition, Trina's suggested approach would require an assessment of all other inputs in circumstances where the Commission found that data provided by Trina was unreliable and unverified.⁸ Similar informational issues were identified in REP 300.⁹

The Commission considers that Trina's claim concerning calculation of the export price is incorrect. The Commission calculated Trina's dumping margin in accordance with subsection 269TACB(2)(a) by comparing the weighted average of export prices over the whole of the investigation period with the weighted average of corresponding normal values over the whole of that period. For each transaction used in that comparison:

- Export prices were calculated under subsections 269TAB(2) and 269TAB(3) for each quarter.¹⁰
- Normal values were constructed under subsection 269TAC(2)(c) for each quarter.¹¹

Renesola's dumping margin

The Commission found Renesola's submission was incomplete in a number of respects including:

⁵ See also the Commission's Dumping and Subsidy Manual at page 44.

⁶ REP 300, pages 17 and 24.

⁷ TER 239, pages 97 and 112.

⁸ TER 239, page 95.

⁹ REP 300, page 17.

¹⁰ TER 239, pages 34-35.

¹¹ TER 239, page 35.

- Renesola did not fully reference its claims to specific information and data that had been verified by the Commission.
- Renesola did not explain its preferred costing method when referring to the method for valuing PV cells with different grades.
- There were reference errors in the spreadsheet provided to the Commission by Renesola and it is not clear whether Renesola's claimed revised dumping margin was affected by those reference errors.
- Renesola did not state or show how the cost of certain PV cells were incorporated into its CTMS. In any event it appears that Renesola did not incorporate benchmark PV cell costs used by the Commission into the cost of the allegedly double counted PV cells, as it should have.

Corporate costs

The Commission notes Tindo's comments concerning corporate costs, however the issue has been raised previously and addressed by the Commission (see TER 239 at section 9.1). The Commission is satisfied that it appropriately tested and accounted for all relevant transactions in relation to inter-company transactions between subsidiaries and parent companies of the four verified exporters. The detail of the costs and verified information are confidential, however the Commission remains satisfied that there was no manipulation of the cost of inputs to the manufacture of PV panels by the four selected exporters.

Tindo has not provided further information or evidence that would cause the Commission to revisit its previous finding on corporate costs.

4.2.2 Market situation

4.2.2.1 CCCME

In Submission 167 the CCCME claims that the Commission has not compared the benchmark prices used in the constructed normal value with the cost to make of Tindo's panels, or the raw materials used by Tindo in its production of panels. All of the raw materials used in the production of Tindo's solar panels were imported and so Tindo's cost to make should be adjusted using the benchmark costs of PV cells.

The Commission has identified the influence of the GOC on exporters' costs and domestic selling prices but it does not follow that Chinese domestic sales are not suitable for determining a normal value when the Australian industry may itself receive the benefit of GOC influenced prices.

4.2.2.2 The Commission's assessment

The Commission notes the comments of the CCCME but observes that the finding of market situation and resulting determination of normal values were not disturbed by the ADRP. The CCCME has not provided further information or evidence that would cause the Commission to revisit its finding on market situation.

4.2.3 Loans at less than market rates

4.2.3.1 Tindo

Tindo claims in Submission 162 that during the investigation period the interest rates for all banks in China were non-competitive market rates and the finance and loan costs of the solar companies were not representative of competitive market costs. Tindo claims that increasing finance costs by between 5.2% and 7.7 % would increase normal values by between 5% and 7%.

In Submission 172 Tindo claims that: a European Union countervailing investigation found PV modules and cell producers received cheap loans; Trina's 2013 Annual Report indicated that Trina received favourable treatment for its debt; and the Commission's countervailing Investigation 322 found that the GOC was involved in the Chinese banking and financial sectors.

4.2.3.2 Trina

In Submission 166 Trina argued that onsite investigation by the Commission found no evidence of GOC policy impacting Trina's interest rates.

4.2.3.3 The Commission's assessment

The Commission notes that Tindo points to passages in TER 239 concerning reduced interest rates from the GOC in the context of the market situation assessment. The Commission addressed the market situation found by using benchmark prices for PV cells. The Commission considers that to the extent that an external benchmark price was used for PV cells in determining normal values, costs would reflect average finance costs outside of China.

In any case, Tindo used the difference in market rates and a bank guarantee given during a time of financial crisis in markets, ie the global financial crisis in 2008.¹² The Commission considers that this would overstate the normal difference between market and guaranteed rates. The Commission has examined verified data and considers that the relevant verified data indicates that Tindo's calculations significantly overstate any effect of increased interest rates.

Tindo's Submission 172 calls in support countervailing investigations in the European Union and Australia, however the current investigation concerns alleged dumping only.

4.2.4 Like goods

4.2.4.1 CEC

In Submission 168 the CEC requested that issues regarding like goods be addressed in this report, namely like goods considerations in relation to:

- physical differences;
- commercial considerations, including bankability and insurance;

¹² Submission 162, page 6.

- the limitations on use of Tindo PV panels for utility-scale solar PV facilities;
- applications such as ground-mounted systems and certification to standards, including ISO 9001, ISO 14002 and OHSAS 18001.

4.2.4.2 The Commission's assessment

The Commission notes the comments of the CEC but observes that the Commission's findings concerning like goods were not disturbed by the ADRP. The CEC has not provided further information or evidence that would cause the Commission to revisit its findings on like goods.

4.2.5 **Poorly timed entry into market**

4.2.5.1 Trina

In Submission 160 Trina submitted that the significant decline in the PV panel market after Tindo entered the market caused material injury to Tindo, not dumping. The ADRP confirmed the Commission's finding that the general decline in the PV panel market was a factor other than dumping that caused injury to Tindo.

In Submission 166 Trina observed that Tindo's Submission 163 confirms that there was no actual volume injury to Tindo over the investigation period. Trina reiterated its view that significant market decline and price reductions (reflecting cost reductions) were the major contributors to Tindo not achieving its forecast sales volume.

4.2.5.2 Tindo

Tindo made the following claims concerning the timing of its entry to the Australian PV panel market (Submission 163 refers):

- The size of the Australian market for PV panels in 2013 was not a key reason for injury suffered by Tindo. Tindo asserts that if not for dumping, the 2012 and 2013 markets were still big enough to absorb all of Tindo's planned production.
- The level of market decline in 2013 was not injurious to Tindo and it grew its business in 2013. Tindo also grew its business (against market trends) in 2014 and 2015.
- The Australian market during the investigation period was large enough to absorb all of Tindo's planned production, however, dumped Chinese PV panels in the market applied pricing pressure to Tindo such that Tindo was not able to follow its planned production.
- The market slow down and the phase out of the South Australian feed-in-tariff (FIT) was not an issue in 2013 and the FIT was in place during the entire investigation period. The South Australian market grew from 2012 to 2013.

4.2.5.3 The Commission's assessment

The Commission notes that the ADRP accepted that the general decline in the PV panel market was a factor other than dumping that caused injury to Tindo (ADRP Report at [28] to [30]).

The Commission also notes Tindo's Submission 163 stating that Tindo grew and continues to grow. The claimed injury therefore is that but for the dumping, Tindo would have done better than it did. It is the Commission's practice (and as noted in

section 5.1, WTO jurisprudence requires) that any method of assessing injury other than coincidence analysis requires a 'compelling explanation' as to why causation exists notwithstanding the absence of any coincidence. Tindo relies on the business plan it had produced as a counterfactual. Tindo's but-for argument is assessed in further detail in section 5.8 below.

Neither the ADRP nor the Commission has accepted Tindo's claim that dumping alone was injuring Tindo.

4.2.6 Other factors causing injury

4.2.6.1 Tindo

In Submission 163 Tindo made the following submissions concerning other factors that may be causing injury to the Australian industry:

- Contractions in demand: Tindo claims that contractions in demand after 2012 could not have contributed to Tindo's injury because of Tindo's relatively small market share.
- Tindo's marketing: Tindo considers that the Commission's findings in respect of Tindo's marketing was subjective and that importers' submissions on the subject of marketing would have been made to suit their own self interests.
- Preference for DC: Tindo reiterates that it offered and sold DC PV panels to the market during the investigation period and that prominence was given by Tindo to DC PV panels.

4.2.6.2 Trina

In Submission 166 Trina stated its view that it was a matter of fact that contractions in demand after Tindo entered the market were due to a market decline and an associated reduction in global prices.

Trina considers that it was reasonable to conclude that, even absent dumping, the price difference between Chinese PV panels and Tindo's PV panels was such that Tindo would suffer material injury.

Tindo claimed that the case that no material injury was caused to Tindo by dumping would be reinforced by correcting what Trina considered to be errors in its dumping margin.

4.2.6.3 The Commission's assessment

Contractions in demand: The Commission notes that Tindo did not succeed in its arguments before the ADRP around its timing of entry into the market. In any event the Commission sees no reason why a small market share would immunise a company from general shifts in demand as Tindo appears to claim.

Tindo's marketing: The Commission notes that Tindo did not succeed in its arguments before the ADRP concerning Tindo's marketing. Tindo has provided no new information or evidence that would cause the Commission to revisit its findings in respect of Tindo's marketing.

Preference for DC: The Commission notes that the ADRP found that the Commission understood Tindo's product offering and the ADRP was unable to discern any error in

the Commission's approach in that respect.¹³ The ADRP stated that it was clear that the Commission understood that Tindo sold DC PV panels but that the Commission found that the price of Chinese DC PV panels was so far below the Tindo product that Tindo could not compete.

The Commission's further comments concerning other factors are contained at section 5.6.

4.2.7 PAD requested

4.2.7.1 Tindo

In Submission 164 Tindo requested that the Commissioner make a preliminary affirmative determination (PAD) under section 269TD in respect of dumped PV panels and impose securities on dumped PV panels under section 42. Tindo claimed that it was experiencing ongoing material injury from dumped PV panels.

4.2.7.2 Trina

In Submission 166 Trina stated that there are no grounds for making a PAD. A PAD can only be made if the Commissioner is satisfied that there are sufficient grounds for publication of a dumping duty notice. The Commission terminated its investigation because it found that injury to the Australian industry was negligible and accordingly a resumed investigation will not have sufficient evidence for the Commissioner to be satisfied that dumped PV panels will cause material injury to the Australian industry.

4.2.7.3 The Commission's assessment

The Commissioner is not satisfied that there appear to be sufficient grounds for the publication of a dumping duty notice.¹⁴ In particular the Commissioner is not satisfied that there appears to be material injury to the Australian industry caused by dumped PV panels. Accordingly the Commissioner may not make a PAD in respect of dumped PV panels.

4.2.8 Investigation period

4.2.8.1 CCCME

In Submission 167 the CCCME submits that the Commission should seek to understand more about the operation of Tindo in the current market before making any recommendation to the Parliamentary Secretary. In particular the CCCME noted that Tindo may not sell solar panels to customers but provides them for free and Tindo presumably resells the electricity into the grid.

4.2.8.2 The Commission's assessment

The Commission notes the comments of the CCCME but observes that evidence before it shows that Tindo did sell PV panels to customers during the investigation

¹³ ADRP Report at [20].

¹⁴ Subsection 269TD(1).

period. If Tindo also conducts its pricing in the way claimed by CCCME then the CCCME does not elaborate on how this would affect the current inquiry.

4.2.9 Continuing dumping

4.2.9.1 Tindo

In Submission 170 Tindo claims that dumping is continuing. Tindo evidenced its claims by reference to the prices of PV cells shown on public websites.

4.2.9.2 The Commission's assessment

The Commission notes Tindo's comments, however in the current inquiry dumping and its effect on the Australian industry must be assessed during the investigation period.

4.2.10 Broader impact of measures

4.2.10.1 CEC

In Submission 168 the CEC pointed to the impact of the inquiry on the Australian solar industry more broadly, claiming that the resumed investigation will add new risks and costs to the Australian solar industry and imposing dumping duties would result in reduced sales and potentially significant net loss of jobs in the Australian solar industry.

4.2.10.2 The Commission's assessment

The Commission notes the CEC's comments concerning possible impacts on the Australian solar industry more broadly but agrees with the CEC that the Commission's legislative remit does not permit an assessment of the broader impact of imposing measures.

5 CAUSATION OF INJURY

5.1 The Commission's approach to causation of injury

Before any action can be taken against dumped goods it must be demonstrated that the Australian industry producing like goods has been injured, that injury has been caused by the dumping of the goods, and that the injury caused by dumping is material. Similarly, if the Commissioner is satisfied in an investigation that the injury that has been or may be caused by the dumping is negligible, then the Commissioner must terminate the investigation.

Australia's legislation in respect of injury and causation reflects Article 3 of the World Trade Organization Anti-Dumping Agreement (ADA).

The Commission will examine all available evidence in establishing whether a causal link between the dumped imports and the injury to the Australian industry exists. This includes the effect of the injury factors set out in section 269TAE of the Act. The *Ministerial Direction on Material Injury 2012* makes clear that, in assessing injury and causation, injury caused by other factors must not be attributed to dumping, however dumping need not be the sole cause of the injury.

Causation is generally examined by using a 'coincidence' analysis. Where no coincidence has been found, or a 'coincidence analysis' has not been possible, the Commission may accept an alternate analytical method such as comparing the industry to a point in time prior to the injury having commenced, or using a 'but for' analytical method.

In a coincidence analysis the volume and prices of the dumped goods and the other injury factors are examined to assess whether any linkage exists between these variables. To complete the causation analysis the Commission examines other factors that cannot be attributed to the dumped goods and excludes the effect of those factors when determining causation.

The weight given to the various causal factors is a matter for the Commissioner to decide having regard to all of the available information available to him in the investigation. Injury factors are examined over the injury period that was identified at the commencement of the investigation.

In understanding causation there will be a focus on injury indicators in the dumping investigation period. It is the Commission's view that subsection 269T(2AD) allows the examination of injury indicators before the investigation period, but it cannot support an inference or presumption that injury identified as occurring before the investigation period can be attributed to dumped imports.

A causal link between dumped imports and any injury may be established only where indicators of injury are present during an investigation period in which dumped goods are found to have been exported to Australia. There can be no presumption that goods exported to Australia before the commencement of the investigation period are dumped goods.

Consideration of injury data in periods prior to the investigation period may be useful in assessing whether publication of a dumping duty notice is justified. For example, it may reveal injury factors unrelated to the exportation of goods that have occurred

before the investigation period but continue to impact on the industry's performance after the commencement of that period.

Consideration of the factors set out in subsection 269TAE(2A) (and any other factor having a bearing on the examination of injury and causation) is mandatory only to the extent that they are known and assessable.

5.1.1 Commission practice

Information obtained from participants in the Australian market, e.g. Australian industry, importers and end users, is used to evaluate the causal effect of the dumped imports on the Australian industry.

As injury caused by factors other than dumping cannot be attributed to dumped goods, the Commission considers the influence of other factors when assessing whether there is a causal link between the injury to the Australian industry and the presence of dumped goods in the market.

Such other factors may include, but are not limited to:

- the volume and prices of imports that are not dumped or subsidised;
- contraction in demand or changes in the patterns of consumption;
- trade restrictive practices of, and competition between, foreign and domestic producers;
- developments in technology;
- the export performance and productivity of the domestic industry.

In considering the effect of any undumped goods in the market, the Commission may have regard to:

- customer preference (i.e. factors other than price such as quality considerations);
- the market share of the goods;
- whether prices have been lowered to compete with the dumped goods;
- like goods sourced from a country with low costs/prices which the dumped source cannot match, but which compete on some other basis.

A determination of causation will be based on positive evidence and involve an objective examination of both:

- the volume of the dumped goods and the effect of those imports on prices in the domestic market for like goods; and
- the consequent impact of these imports on domestic producers of such goods.

The Commission will undertake a price undercutting analysis that focuses on data that covers transactions made during the investigation period. This analysis compares the price of the imported goods with the selling price of the locally produced goods, ensuring that the transactions are made under the same conditions (e.g. timing, volume, discounts, delivery and credit terms, and the customer's level of trade).

Where the Commissioner is satisfied that the goods the subject of the investigation have been dumped and the Australian industry has suffered material injury and where there are no other causes of injury that can be identified in the investigation the Commission will generally consider it reasonable to conclude that a causal link exists between dumping and the injury.

Causation methodology

Causation is typically assessed by examining the trends or movements in the volumes and prices of dumped imports over time and corresponding trends or movements in the relevant injury factors.

Where there is a coincidence in timing between the two this may mean there is a causal connection. For example, an increase in the volume of dumped goods may coincide with the decline in the industry's sales in Australia, or the prices of the dumped goods can be compared to the movements in the Australian industry's sales prices.

In examining causation, the effect of the dumped goods on the Australian industry's prices will be considered. The Commission assesses whether there has been any significant price undercutting by the dumped imports, or whether there has been price depression or price suppression.

Injury causation may be established through an examination of volume or price effects. In some circumstances there may be no increase in the volumes of the dumped goods but a positive causation finding may be possible where the requisite price effects exist.

In some cases dumped imports may be known to have commenced at a particular point in time. In this situation, when examining causation, the current state of the industry may be compared to the state the industry was in during a period immediately prior to the commencement of dumping.

In some cases evidence may show that imported goods at dumped prices won contracts because of their price advantages. If those price advantages are wholly attributable to dumping, then this evidence may establish a direct link to the injury experienced by the Australian industry that had also contested those same contracts.

The Commission may utilise 'soft' information when examining causation. For example, users of the imported and locally made goods may provide responses to user questionnaires on issues such as substitutability of the goods, conditions of competition and price responsiveness. In the resumed investigation the Commission commissioned a survey of PV panel end users to address the ADRP's concerns that the Commission should undertake an analysis of the end-user PV panel market.

Where no coincidence has been found, or a 'coincidence analysis' has not been possible, the Commission may accept an alternate analytical method (such as a 'but for' analysis) when examining causation. Any alternate method will be required to be evidence based. The Commission will conduct such investigations in accordance with the WTO jurisprudence that requires that any other method, other than the coincidence

analysis described above, will require a 'compelling explanation' as to why causation exists notwithstanding the absence of any coincidence.¹⁵

Under a 'but for' analytical method it may be possible to compare the current state of the industry to the state the industry would likely have been in if there had been no dumping. Such analysis should isolate the likely effects of the dumping in circumstances where there have been other effects. A party submitting information to demonstrate injury based on 'but for' grounds must provide, and explain, the evidence on which this claim rests. For example, the party might explain how they estimated the effects of the dumping by using suitable accounting methods and counterfactual analysis. In any event it is not sufficient to simply assert such an effect as this will not meet the evidentiary requirement.

The coincidence in movements in dumped imports (import volumes, market share, and prices) and the movements in relevant injury factors may not, of itself, prove causation. The Commission will carefully examine all of the available evidence, including the effects of other factors, when reaching a conclusion on causation.

The methodology the Commission follows in seeking to meet the non-attribution requirement in subsection 269TAE(2A) will be based upon available evidence. The Commission will consider whether the particular factor in question:

- exhibited a trend that is inconsistent with causation of injury; or
- exhibited a trend that is consistent with causation of injury and there was a coincidence in time between those trends and the injury indicators.

Concerning the first factor in the illustrative list – the volume and prices of imported like goods that are not dumped – the Commission must consider the effects of imports from other countries that are not the subject of the investigation where this is known to be a factor impacting on injury.¹⁶ Such imports are taken to not be dumped.

In determining the volume of dumped imports the Commission will take care to ensure imports from any producers found to be not dumping are excluded.¹⁷

Concerning demand, competition, and technology factors in the illustrative list, the injury can be caused by a declining demand for a particular product driven by, for example: changes in consumer preference for a substitute product and new technologies; non price factors such as inferior quality, performance and service; or

¹⁵ Two relevant reports are US – *Certain Steel Products DS/248-259/R* 2003 (at 10.304); and US - *Hot Rolled Steel DS/184/AB/R* 2001 (at 229-230).

¹⁶ Consistent with WTO Panels *Egypt – Rebar*, and *EC – Pipe Fittings*.

¹⁷ The WTO Appellate Body in *European Communities – Anti-Dumping Duties on Imports of Cotton-type Bed Linen from India - Recourse to Article 21.5* determined that injury caused by "volume and prices of imports not sold at dumping prices" must be separated and distinguished from injury caused by the "dumped imports". It also held that it is impermissible to presume that imports attributable to non-examined producers are in all circumstances dumped for purposes of injury analysis solely because they are subject to the imposition of anti-dumping duties under Article 9.4 of the ADA.

general economic conditions causing a decline in demand for the product in question. These will be taken into account where relevant.

In examining the effects of the other factors, the Commission considers that the purpose is to 'disentangle' their effects from the effects of dumping. A judgement must be made as to whether the subsection 269TAE(2A) factors have acted in such a way to 'break the causal link' that may otherwise seem apparent between the dumped goods and the material injury.

5.2 Tindo's end-user analysis before the ADRP

In Tindo's application for review, Tindo made an argument that the causation analysis used by the Commission in TER 239 significantly disadvantaged Tindo because the analysis was conducted at the wrong level of trade. The majority of Tindo's sales during the investigation period were to end users and Tindo claims that the Commission did not adequately consider such sales in its analysis.¹⁸

The basis for Tindo's argument was:¹⁹

- a finding by the Commission in SEF 239 that the weighted average price undercutting by two importers in sales to end users during the investigation period was around 20 per cent;²⁰ and
- the Commission's assessment of the residual exporters' dumping margin of 21.1 per cent.²¹

On that basis, according to the applicant's analysis, applying a dumping duty of 21.1 per cent would fully cure the 20 per cent price undercutting in sales to end users, rendering Tindo's installed prices close to, or even cheaper than, prices to end users of installed Chinese panels. Tindo claimed that:²²

Using the residual exporters determined dumping margin of 21.1%, Tindo Solar's sales to end users would be very close to, the same price, or even cheaper than undumped sales to end users of Chinese panels.

The Commission has failed to focus on the appropriate end-user level of trade in the following statement at 8.7 of the Termination Report:

Although the imported products were dumped, even in the absence of dumping (that is, if the imported goods had been sold at a price which was commensurate with the normal value plus importation costs) the gap between Tindo's price (regardless of AC or DC) and the price of imported

¹⁸ See pages 12 and 13 of Tindo's application for review.

¹⁹ See page 13 of Tindo's application for review.

²⁰ See SEF 239 at page 55.

²¹ The dumping margin for residual exporters was determined as a comparison between the weighted average of export prices with the corresponding weighted average normal values in accordance with paragraph 269TACB(2)(a) of the Act. See TER 239 at page 50.

²² See pages 13 and 14 of Tindo's application for review.

DC models has meant that imports remain at a significant price advantage over the investigation period.

The above statement is misleading and not correct when analyzing sales of panels to endusers. The statement is based predominantly on an analysis of wholesale sales of solar panels which does not properly represent Tindo's level of sales.

Tindo re-asserts that in the absence of dumping, Tindo's price to the end user would have been the same or cheaper than a solar system using the dumped Chinese PV solar modules or panels.

The SEF's finding of 20 per cent undercutting combined with the Termination Report's finding of a 21.1% dumping margin suggests Tindo's offering to end users would be very similar to the same system using dumped Chinese PV solar modules or panels.
[emphasis added]

Tindo has concerns with the following erroneous statement in Section 8.1 of the Termination Report No. 239 with regard to pricing differential:

...the application of a dumping duty would have little remedial effect on the specific forms of injury being suffered by Tindo.

Again, these comments reflect the wrong level of trade comparison. These comments are not based on sales made to the end user.

A dumping margin of 21.1% applied to the majority of Chinese exports would provide Tindo with a very competitive offering to end users and would be most beneficial in growing Tindo's manufacturing business.

Commission's findings relating to Tindo's end-user analysis

The Commission accepts that the percentages compared by Tindo have some superficial similarity in the sense that, in percentage terms, they are close. However the Commission observes that the percentages compared by Tindo are percentages of different numbers, namely:

- the 20 per cent price undercutting figure in SEF 239 is expressed as a percentage of the price of Tindo's installed PV panels;²³ and
- the 21.1 per cent dumping margin in TER 239 is expressed as a percentage of the price of Chinese PV panels at import (which does not include the cost of inverters or other components, or installation costs).²⁴

It would be a mathematical error to compare these percentages without first expressing them as percentages of the same number. Correcting for this error and

²³ As noted in SEF 239, two of the five major importers sold poly-crystalline DC PV modules to end-users inclusive of installation. Those two importers collectively accounted for approximately 5 per cent of imports of poly-crystalline DC PV modules exported from China during the investigation period. Prices of those imports undercut Tindo's installed price by between 11 per cent and 28 per cent. The weighted average price undercutting by those two importers during the investigation period was around 20 per cent. See SEF 239 at page 55.

²⁴ This is the dumping margin for residual exporters which was determined as a comparison between the weighted average of export prices with the corresponding weighted average normal values in accordance with paragraph 269TACB(2)(a) of the Act. See TER 239 at page 50.

expressing those percentages as percentages of the price of installed Chinese PV panels the Commission has found that:

- Dumping duties of 21.1 per cent on uninstalled Chinese PV panels would increase the price of installed Chinese PV panels by approximately 6 per cent;
- Price undercutting of 20 per cent by installed Chinese PV panels of Tindo's installed PV panels would by fully cured only by a 24 per cent increase in the price of installed Chinese PV panels.

Accordingly the Commission finds that installed Chinese PV panels would continue to have a significant price advantage over Tindo's installed PV panels. The dumping duty would reduce the price undercutting by only a quarter because the approximately 6 per cent increase in the price of installed Chinese PV panels resulting from dumping duties would be a quarter of the 24 per cent increase in the price of installed Chinese PV panels that would be required to cure the price undercutting. This finding is consistent with the finding in TER 329, namely that "even in the absence of dumping ... the gap between Tindo's price (regardless of AC or DC) and the price of imported DC models has meant that imports remain at a significant price advantage over the investigation period".²⁵

The remainder of this section describes how the Commission made the necessary calculations to express the dumping margin and price undercutting percentages as percentages of the price of installed Chinese PV panels.

Expressing the dumping margin as a percentage of the price of installed Chinese PV panels

The dumping margin of 21.1 per cent from TER 239 is calculated as a percentage of the export price of uninstalled Chinese PV panels. The export price of uninstalled Chinese PV panels comprises only one part of the cost of installed Chinese PV panels. The price of installed Chinese PV panels also reflects the cost of a number of other inputs such as inverters and Australian labour. Inputs other than PV panels would not attract dumping duties so the effect of imposing a 21.1 per cent dumping duty on uninstalled Chinese PV panels would be a smaller percentage increase in the price of installed Chinese PV panels (even assuming the full dumping duty was passed through to end users).

The Commission has estimated the effect on the price of installed Chinese PV panels of imposing a 21.1 per cent dumping duty on uninstalled Chinese PV panels. The estimate assumes that the full dumping duty is passed through to end users in the price of installed Chinese PV panels. The Commission estimates that imposing a 21.1 per cent dumping duty on uninstalled Chinese PV panels would cause an approximate 6 per cent increase in the price of installed Chinese PV panels. This estimate of the increase in the price of installed Chinese PV panels is based on information provided to the Commission by Tindo. Tindo provided this information concerning prices of installed Chinese PV panels obtained by Tindo during tenders.

²⁵ TER 239 at page 69.

The Commission considers that this estimate of a 6 per cent increase in the price of installed PV panels may be an upper limit because it assumes that the full dumping duty would be passed through to end users in the cost of installed PV panels.

Expressing the price undercutting as a percentage of the price of installed Chinese PV panels

The price undercutting of approximately 20 per cent from SEF 239 used in Tindo's end-user analysis is expressed as a percentage of the price of installed Tindo PV panels. To properly compare the price undercutting to the Commission's estimate of the increase in the price of installed Chinese PV panels, the price undercutting needs to be expressed as a percentage of the price of installed Chinese PV panels.

In general, price undercutting of 20 per cent of Good A by Good B (that percentage expressed as a percentage of Good A) will be cured by a 25 per cent increase in the price Good B (that percentage expressed as a percentage of Good B).²⁶ The price undercutting at the end-user level of approximately 20 per cent identified by Tindo in SEF 239 is in fact closer to 19.5 per cent and accordingly that percentage expressed as a percentage of the price of installed Chinese PV panels is approximately 24 per cent.

5.3 Coincidence analyses

As stated above in section 5.1, in a coincidence analysis the volume and prices of the dumped goods and any resulting impact on the Australian industry (including the relevant injury factors) are examined to assess whether any linkage exists between these variables.

A coincidence analysis will identify any correlation or relationship between import/domestic prices and import/domestic volumes. The existence of correlation is consistent with a causal relationship but it does not establish a causal relationship. For example, if two variables are correlated then one of those variables may be responding to the other or they may both be responding to a third variable. As stated in the Commission's Dumping and Subsidy Manual, the coincidence in movements in dumped imports (import volumes, market share, and prices) and the movements in relevant injury factors may not, of itself, prove causation.

However if there is no correlation evident in a coincidence analysis or the correlation runs counter to that expected from injury caused by dumping then, absent some compelling explanation, there is no evidence of causation.

In the current case coincidence analyses were undertaken using monthly data as the Commission considered that this would be more sensitive in showing any relationships between the variables examined.

²⁶ For example, if Good A is priced at \$100 and Good B is priced at \$80 then:

- Good B is 20 per cent less than Good A (expressed as a percentage of Good A, ie as a fraction, 20/100); and
- Good A is 25 per cent greater than Good B (expressed as a age of Good B, ie as a fraction, 20/80).

5.3.1 Volume injury

Tindo did not claim volume injury in its original application (refer TER 239 at section 8.5.1) however, before the ADRP, Tindo claimed that it had suffered volume injury (refer Tindo's application for review at section 10.8).

Dumped imported and domestic volumes

The Commission considers it reasonable to expect that dumped imported volumes and domestic volumes of PV panels would show a negative correlation if imports had a deleterious effect on the performance of the Australian industry. In particular, dumped imports entering the Australian market and causing volume injury to the Australian industry would displace Australian volumes.

The Commission graphed total imports from the four selected Chinese exporters on the same graph as it graphed volumes sold by Tindo. The Commission sought to better show the correlation between these variables by graphing them on differently scaled vertical axes. The analysis is not intended to compare the levels of these variables, only to examine the extent to which there is coincidence of movement between them.

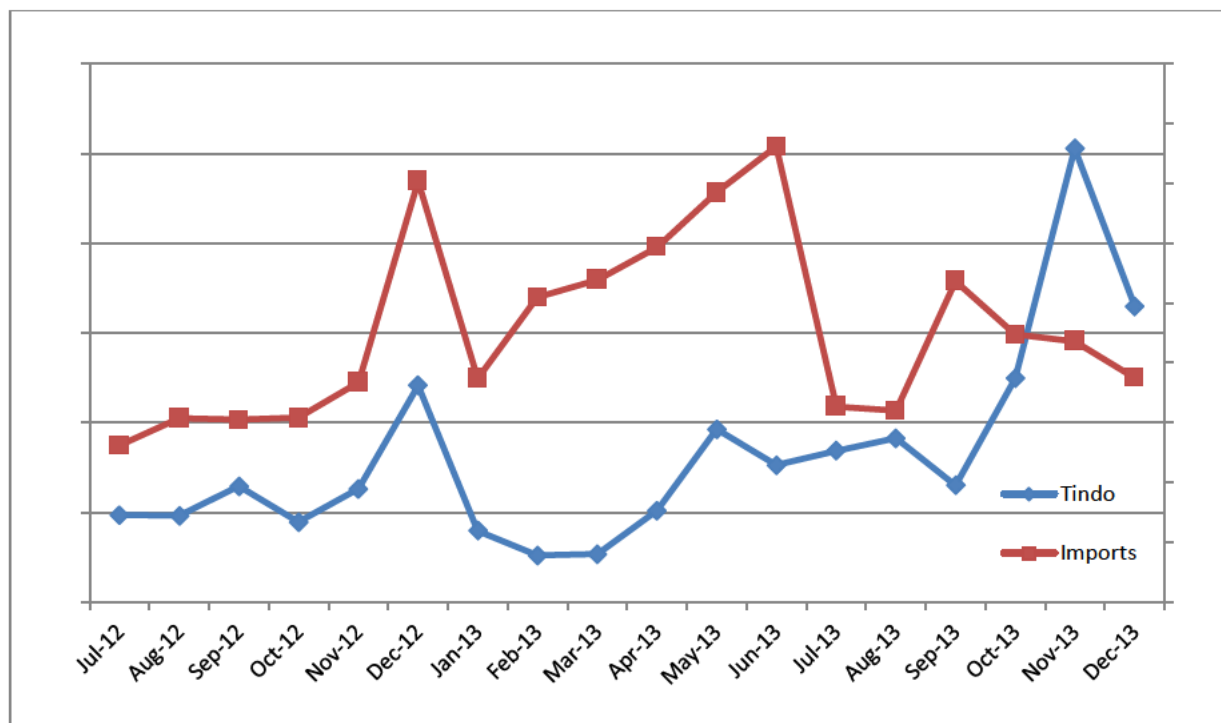


Figure 1 – Sales volumes Tindo and imported volumes – graphed against differently scaled axes

In the period from July 2012 until January 2013 there appears to be a strong positive correlation between Australian and Chinese volumes of PV panels. This positive correlation is inconsistent with Tindo's claims that it was injured by dumping from September 2012 and onwards; when volumes of imports increased in December 2012, Tindo's volumes also increased. It seems likely during this period that both imports and Tindo's volumes were responding to some other common factor such as changes in consumer demand.

Following January 2013 there is no correlation evident between Tindo's sales and imports. For example, a sharp and significant drop in imported volumes in July 2013 is against little corresponding change in Tindo's volumes. Similarly, the significant upward trend of Tindo's volumes toward the end of the investigation period is in contrast to slightly decreasing or flat imported volumes.

Import prices and domestic volumes

Similarly, the Commission considers it reasonable to expect that import prices and domestic volumes of PV panels would show a positive correlation if dumped imports were causing volume injury. Dumped imports entering the Australian market at low prices and causing volume injury to the Australian industry would reduce Australian volumes.

The Commission graphed the weighted average price of total imports from the four selected exporters on the same graph as it graphed volumes sold by Tindo.

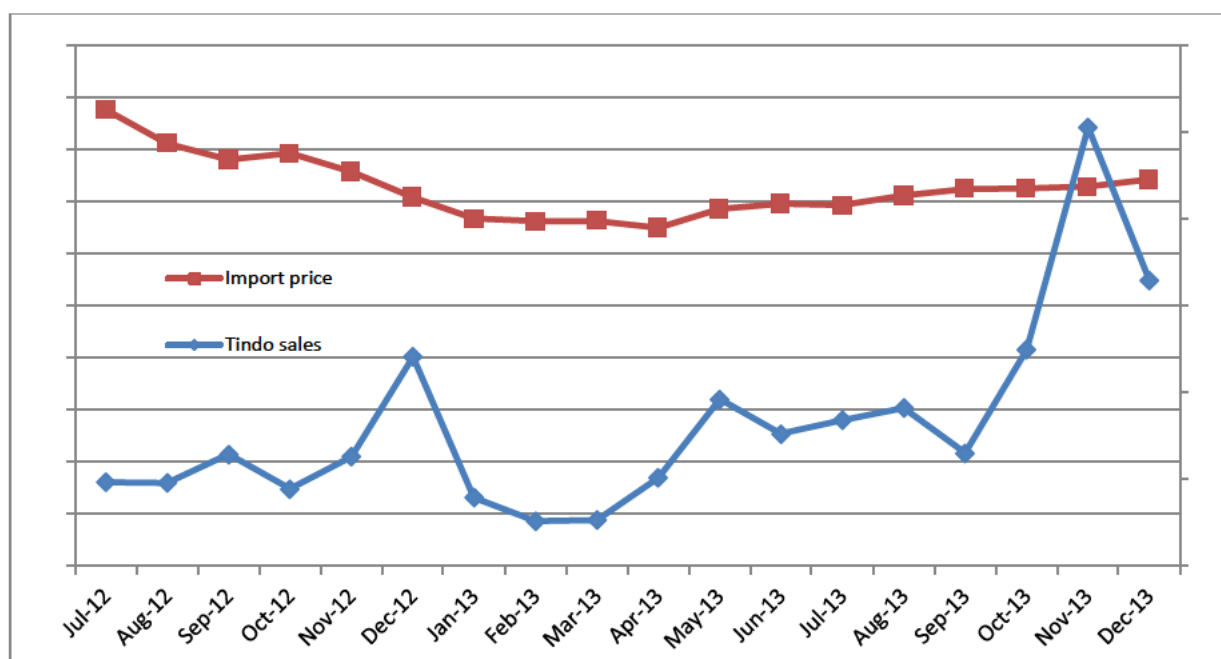


Figure 2 – Import prices and Tindo sales

The Commission notes that the graph for import prices is quite stable compared to Tindo's sales volumes indicating that Tindo's volumes are responding to other drivers. In particular the Commission notes that:

- Tindo sustained growth from October 2012 until December 2012 in the face of falling prices of Chinese PV panels;
- Tindo's volumes reached their nadir in February 2013 two months before prices of Chinese PV panels reached their nadir;
- The substantial increase in Tindo's sales volumes at the end of the investigation period appears not to be responding to the change in Chinese PV panels, the prices of which were steadily increasing from April 2013.

Accordingly the Commission is unable to identify any correlation or response between import prices and Tindo's sales volumes.

5.3.2 Price injury

Imported and domestic prices

The Commission has revisited aspects of its analysis in Figure 10 of TER 239 showing price levels of Chinese PV panels and Tindo's prices for AC and DC models. For purposes of this report, in order to better assess any correlation between these variables, the Commission has graphed the prices on a monthly basis throughout the investigation period.

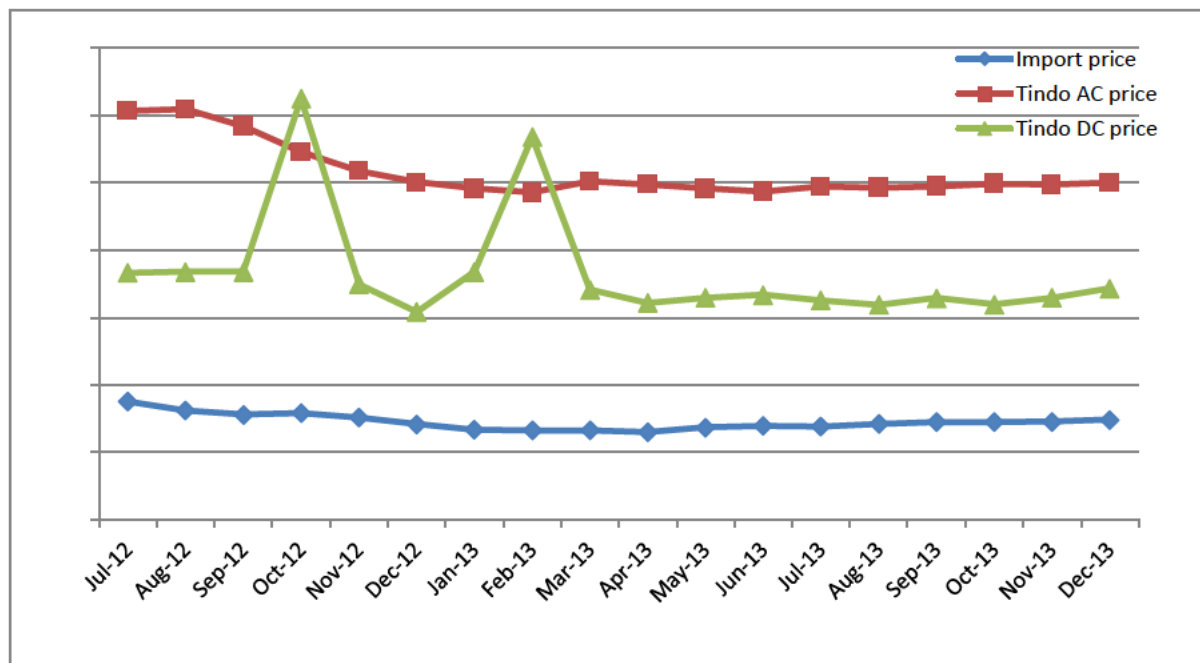


Figure 3 – Import prices (without dumping duties), Tindo AC and DC prices

Figure 3 illustrates that Chinese PV panels have a significant price advantage. As noted in TER 239 and elsewhere in this report, there is a significant price advantage held by Chinese PV panels even in the absence of dumping.

In terms of correlation between the variables, the Commission notes that there is not a significant amount of movement in these price levels except for two spikes in the price of Tindo's DC PV panels in October 2012 and in February 2013. The Commission would make two comments concerning these spikes:

- Firstly, the spikes are not in response to any change in price for Chinese PV panels. The price of Chinese PV panels during the first spike is falling steadily and during the second spike is static. There is not, as might be consistent with price injury being caused, an increase in the price of Chinese PV panels from dumped levels that would allow an injured Tindo to raise its DC prices.
- Secondly, these price spikes correspond with low volumes in Tindo's sales. The first price spike, in October 2012, corresponds with Tindo's lowest recorded volumes in 2012 (see Figure 2 above). The second price spike, in February 2013, corresponds with Tindo's lowest recorded volumes in 2013 and lowest over the entire investigation period (see Figure 2 above). It is not clear whether Tindo was experimenting with its pricing during these times or whether it misjudged the market, however it seems reasonably clear from this analysis

that, at least for those periods, Tindo's own pricing policies were the likely cause of low sales volumes.

The Commission notes that the price for Tindo's DC PV panels (which compete most closely with Chinese PV panels in terms of price and features) has not fallen significantly over the investigation period (apart from the spikes).

5.4 Survey of end users by Colmar Brunton

The ADRP stated that the conclusions the Commission reached in TER 239 concerning causation of injury required further analysis and that such analysis should be of the end-user market for PV panels (see the ADRP's reasons at paragraph 75 and elsewhere). In accordance with that guidance from the ADRP, the Commission sought proposals from companies with expertise in designing, undertaking and analysing consumer surveys.

The Commission's request for proposal

The Commission sought quotations and proposals for analyses from consumer survey companies that would allow the Commission to better understand consumers' purchasing decisions around installed PV panels. In particular the Commission sought to understand from a survey of consumers the extent to which a small price increase in imported PV panels would affect sales of Australian PV panels (even if the Australian PV panels remained significantly more expensive).

Proponents were asked to submit a proposal to prepare and conduct an online survey and report according to the following:

- Sample
 - Sample size of n=500.
 - Sample of respondents to be sourced from across Australia with broadly representative minimum numbers from each state and territory.
 - Respondents should be homeowners selected on the basis they either have PV panels installed or would seriously consider purchasing in the future.
- Survey design
 - The survey should take respondents an average of 10-12 minutes to complete.
 - Questionnaire and questions should be designed by service provider in collaboration with relevant Commission staff.
 - The survey should cover the key issues of consideration when making a decision to purchase PV panels. Service provider to develop a choice exercise for respondents and ask them to trade off PV panel installations with varying levels of cost and quality. Results should allow service provider to model the importance of price in the purchase decision hierarchy and the level of price or price difference that tips a buyer from imported to Australian assembled PV panels.

Colmar Brunton's proposal

The Commission issued three requests for quotation and proposal for the survey work and received two responses. Colmar Brunton was selected on the basis that it represented value for money and Colmar Brunton had experience and capability in the area of market research.

An important aspect of Colmar Brunton's proposal was the choice modelling that it proposed to do. From Colmar Brunton's proposal:

Choice modelling

Discrete choice modelling with paired comparisons gives consumers two competing choices. It provides a decomposition of attributes, but requires a complex adjustment process to give volumetric predictions. Choice modelling gives respondents scenarios which are as close to real life as possible, for example.

- Several 'choices' or product offers will be presented to the respondent in a grid format. Including elements of the decision to be agreed with ADC but are likely to include price, Australian assembly, and level of quality guarantee.
- The respondent is asked to choose which offer they believe they would choose were they facing that choice in a real market situation.

This approach most represents the real market in that consumers are often faced with choosing from an array of product offers. This approach is the best design to use when the research is required to model a market simulation, thus understanding price sensitivity and source of new volume. In this research we are aiming to test how each pricing option for the PV panels would perform in the market and hence it is important a market simulation approach is adopted.

Outputs of the model are direct aggregations of consumers' choices. The model will provide a direct consumer driven prediction without any complex calibration of results. The predictions are broken down to options and levels, and can clearly show the source of new share and can easily be analysed for different target markets.

The questionnaire

Following discussions between Commission staff and Colmar Brunton analysts the questionnaire format focussed primarily on the questions that provided input to the choice modelling. The main question in the choice modelling section presented a grid of options of different PV panel suppliers to survey respondents. The parameters that varied in the grid of options were length of warranty (as a proxy for quality) and installed prices. The highest price in the range of installed prices was 25 per cent higher than the lowest price in the range.

Findings of the end-user survey

The key findings from the Colmar Brunton end-user survey work that was undertaken were:

- There would be very limited change in demand for Australian PV panels in response to a change in the price of Chinese PV panels. This finding was consistent across a number of scenarios with Australian PV panel volumes being the least responsive of all PV panels to changes in Chinese PV panel prices in most modelled cases.

- In the scenario where installed Chinese PV panels increased in price by 6 per cent, the modelled change in the demand for Australian PV panels was 2 per cent.
- End users are price sensitive and in scenarios where Chinese PV panel price increases were modelled, end users for the most part switched to the next cheapest alternative rather than Australian PV panels. Once a certain level of quality is guaranteed, price becomes the most relevant factor for end users.
- Price and quality were the most influential factors when end users were choosing PV panels, with more than 50 per cent of respondents choosing these as in the top two most influential factors. By the same measure, country of assembly was the third most influential factor although this was only ascribed as being in the top two most influential factors by 21 per cent of respondents.
- End users attributed the highest utility²⁷ to having Australian PV panels compared to PV panels from other countries, however this did not translate to a significant change in demand for Australian PV panels in response to increases in prices for Chinese PV panels.
- A significant proportion of end-users with PV panels installed did not know where their PV panels were made (31 per cent of respondents). A further 31 per cent of respondents believed that their PV panels were made in Australia; based on the data available to the Commission and the Commission's understanding of the market, this is clearly incorrect.

A copy of Colmar Brunton's report is contained at Attachment 1.

The Commission's assessment of the end-user survey

The Commission considers that the findings in the Colmar Brunton end-user survey support the view that dumped Chinese PV panels caused negligible injury to the Australian PV panel industry. It is clear from the Colmar Brunton analysis that there would be very little change in demand for Australian PV panels in response to a change in the price of Chinese PV panels – it follows that dumped Chinese PV panels caused negligible injury to the Australian PV panel industry.

The Commission notes in particular the finding by Colmar Brunton that, where installed Chinese PV panels increased in price by 6 per cent, the demand for Australian PV panels would increase by only 2 per cent. In any event the Commission notes that a change in demand of 2 per cent is well within the margin of error of the Colmar Brunton end-user survey and that a 2 per cent increase in Tindo's volumes would represent less than a 0.02 per cent change in shares of the overall Australian market during the investigation period.

The Commission notes the Colmar Brunton finding that quality and price are the primary drivers for purchase decisions, however it seems for most end users that,

²⁷ Utility is the strength of influence of an individual attribute. The greater the utility the greater the strength of an attribute in the decision.

provided a certain level of quality is obtained, price becomes the dominant driver. This finding, and other findings in the Colmar Brunton report, support the view that end users of PV panels are generally price sensitive.

The Commission also notes the impact of the country of production on end users. End users clearly aspire to own Australian made PV panels however when end users consider this factor against other factors (notably price and quality) in practice, there is little or no price premium attached to Australian PV panels (by virtue only of the fact that PV panels are made in Australia – a small percentage of the market appear to be persuaded to pay more for the Tindo product by reason of Tindo's product differentiation, which is considered in section 5.7). The Commission also notes the significant proportion of end-users with PV panels installed who did not know where their PV panels were made. The Commission considers that these figures tend to reflect a lack of real concern with the country of production at the time a purchasing decision for PV panels is made by end users.

5.5 Econometric analysis

The Commission asked economists in the Department of Industry, Innovation and Science's Industry Economics branch to undertake an econometric analysis based on available data and advise on the economic relationship between dumped PV panels and PV panels produced by Australian industry. In particular the Commission sought to understand how demand for Australian PV panels would change in response to a change in prices of dumped PV panels and to establish whether there is non-negligible injury being caused to the Australian industry by dumped PV panels.

The Commission provided the Industry Economics branch with the following data:

- ABF import data:
 - four years of data showing imports from all countries.
- Importer data:
 - 18 months of data;
 - Verified price and volume data from Australian sales by the top four importers of Chinese PV panels.
- Australian industry data:
 - 18 months of data;
 - Verified price and volume data from the Australian industry.

In this instance the Industry Economics branch was unable to assist the Commission due to data limitations. The report from the Industry Economics branch stated:

Industry Economics branch economists have assessed the available data, which was provided to the branch by the Commission. They noted the following:

- The available data does not lend itself to econometric analysis given the very short sample period.
- The domestic producer in this case is a young firm that has changed its business model from wholesale to direct customer during the relevant period. This change in business model means that sales data in the different time periods are not directly comparable.

- In relative terms, the applicant's market share remained very small as defined by domestic production plus imports. This makes an assessment of material injury and causation more difficult.

The Commission considers that the inability to complete an econometric analysis has not impacted its investigation. The Commission considers that information and analysis referred to elsewhere in this report is sufficient to support the Commission's conclusions.

5.6 Other factors

The Commission notes that the ADRP did not disturb the Commission's findings in TER 239 that other factors, including contractions in demand and Tindo's marketing contributed to injury to Tindo (see section 4.2.6 above). The Commission's assessment of other factors is contained at section 8.6 of TER 239.

As noted above, in examining the effects of the other factors, the Commission considers that the purpose is to 'disentangle' their effects from the effects of dumping. A judgement must be made as to whether the subsection 269TAE(2A) factors have acted in such a way to 'break the causal link' that may otherwise seem apparent between the dumped goods and any injury. In a case such as the present case, where there is no apparent causal link between the dumped goods and injury, the other factors play a less prominent role in the analysis. It is suffice to note that the other factors provide some explanation for any injury suffered by Tindo.

5.7 Attenuation of Tindo's injury by product differentiation

New information provided by Tindo following the ADRP's revocation indicates that another factor played a significant role in attenuating the injury that might have been caused to the Australian industry by dumped PV panels.

In a number of submissions, particularly Submission 174, Tindo identified substantial quality differences between its products and Chinese PV panels. It seems clear from the information provided by Tindo that Tindo uses high quality processes and components throughout its production. Tindo also claims that Australian consumers can identify a premium product and are prepared to pay higher prices for premium products.

The Commission considers that Tindo has taken a commercial decision to vertically differentiate its product from those of its competitors by producing a high quality product. This would tend to limit Tindo's potential customers to those who have the ability to pay Tindo's higher prices but would also have the effect of lessening the impact of competition from lower quality PV panels, including many dumped PV panels. The Commission considers that this vertical product differentiation would attenuate injury from dumped PV panels that might otherwise occur. The Commission considers that this attenuation of injury would be in addition to, and would reinforce, the findings in the Colmar Brunton report that dumped Chinese PV panels caused negligible injury to the Australian PV panel industry.

5.8 Tindo's but-for causation argument

The Commission has found, for purposes of this report, that coincidence analyses indicate that no injury has been caused to the Australian industry. Tindo considers

that such analyses would in any event be 'statistically irrelevant' in the current investigation.²⁸

Tindo appears instead to rely on a but-for causation argument, namely that but for dumped Chinese PV panels, Tindo's business would be materially better off than it currently is.²⁹

As noted elsewhere, an analysis other than a coincidence analysis requires a compelling explanation under WTO jurisprudence. In any event it is not sufficient to simply assert such an effect as this will not meet the evidentiary requirement. For a but-for argument to succeed, a compelling explanation may include reliable evidence of what the counterfactual would be (i.e. what would have happened to the Australian industry in the absence of dumping) and a clear difference (showing injury) between the state of the Australian industry in the factual and the state of the Australian industry in the counterfactual.

Tindo relies upon a business plan prepared for it by Ernst & Young in 2011 as a counterfactual.³⁰ The resumed investigation has provided further opportunity for the Commission to assess the reliability and probative value of Tindo's business plan. On the basis of that assessment the Commission has formed a view that Tindo's business plan is not reliable evidence sufficient to found a counterfactual. The Commission has formed that view for the following reasons:

- The Commission found in TER 239 that the business plan was not up to date when Tindo started in business in 2012.³¹ Nonetheless Tindo relies on its business plan as a counterfactual for the entire investigation period, including for 2013.³²
- Tindo itself made an admission as to the reliability of the business plan. Tindo's application for review complained that it was unreasonable for the Commission to refer to its 'out of date business plan' in TER 239.³³
- The business plan contained factual errors concerning the size of the Australian PV panel market.³⁴
- The business plan was incorrect concerning its forecast of pricing in the Australian PV panel market, which only in part was due to dumping.
- The Commission notes that the business plan contains a number of important disclaimers concerning the inputs, commercial assumptions and forecasts

²⁸ Refer Submission 174 at page 19.

²⁹ Refer Submission 163 at paragraphs 15 to 17.

³⁰ Refer Submission 163 at paragraph 4.

³¹ Refer TER 238 at section 8.5.4.

³² Refer Submission 163 at paragraph 4.

³³ Refer Tindo's application for review at page 20.

³⁴ Refer Submission 163 at paragraph 3.

contained in the business plan. The Commission considers that these disclaimers provide strong qualifications to any reliance that might be placed on the business plan for purposes of this investigation.

- Tindo has maintained confidentiality over its business plan notwithstanding that it continues to rely heavily on it in its submissions. Because of this confidentiality other interested parties have not had an opportunity to comment on the business plan. Allowing interested parties an opportunity to comment on evidence such as the business plan tests the probative value of that evidence. Where evidence cannot be tested in this way, the Commission may accord less weight to that evidence than it otherwise would.

In the absence of reliable evidence for Tindo's claimed counterfactual, the Commission considers that Tindo's claims that Chinese PV panels caused injury to the Australian industry lack an evidential basis. The Commission notes in any event that the finding by Colmar Brunton that end users would choose the next cheapest alternative if the price of Chinese PV panels were to rise would counter the conclusions reached by Tindo on the basis of its but-for argument.

5.9 Conclusion on causation

On the basis of the above findings, the Commission concludes that there was no or negligible injury to the Australian industry that was caused by dumped Chinese PV panels. In summary, these findings are:

- Correcting for the mathematical error in Tindo's end-user analysis, dumping duties would cause prices of installed Chinese PV panels to rise by no more than approximately 6 per cent and Chinese PV panels would continue to have a significant price advantage;
- Coincidence analyses identify no correlations that would indicate that Tindo's volumes or prices are being affected by Chinese PV panels;
- The survey of end users by Colmar Brunton finds, among other things, that: there would be very little change in demand for Australian PV panels in response to a change in the price of Chinese PV panels; and a 6 per cent increase in the price of installed Chinese PV panels would cause a negligible increase in Tindo's volumes, if any;
- The significant product differentiation by Tindo of its PV panels attenuates injury to Tindo that might otherwise result from dumped Chinese PV panels;
- Tindo has not provided a reliable evidential basis for its argument that, but for the presence of dumped Chinese PV panels, Tindo's business would be materially better than it is.

6 SUBMISSIONS IN RESPONSE TO SEF 239A

The Commission sought submissions from interested parties regarding the preliminary findings in SEF 239A. The Commission received submissions from the following interested parties:

Party	Date submission received	EPR reference	Referred to hereafter as
CEC	14 September 2016	EPR document 177	Submission 177
CCCME	22 September 2016	EPR document 179	Submission 179
Tindo	23 September 2016	EPR document 180	Submission 180
Trina	20 September 2016	EPR document 178	Submission 178

Public record versions of these submissions can be found on the EPR.

6.1 Loans at rates not reasonably representative of market costs

6.1.1 Tindo

Tindo continues to claim in Submission 180 that the Commission has not taken proper account of GOC loans to Chinese PV panel producers. Tindo claims that those GOC loans are at rates that do not reasonably represent market rates.

Submission 180 provided no new information concerning GOC loans to Chinese PV panel producers; rather, Tindo's submission made technical arguments concerning how Tindo believes GOC loans should be treated under section 43 of the *Customs (International Obligations) Regulation 2015* (the Regulation). Tindo reiterated its claims made in previous submissions that accounting for GOC loans in the manner it suggests would have a significant upward impact on normal values. Tindo refers to calculations it previously provided to the Commission in which Tindo claimed that increasing finance costs by between 5.2 and 7.7 per cent would increase normal values by between 5 and 7 per cent.

6.1.2 The Commission's assessment

Tindo appears to argue that because a finding of market situation and a finding that PV cell costs do not reasonably reflect competitive market costs are separate findings they should be remedied separately. Tindo claims that it is not correct to say that the Commission could remedy a market situation using a benchmark for PV cells (Submission 180 at page 2).

Paragraph 269TAC(2)(a) provides, inter alia, that where the Minister is satisfied that because there is a situation in the market of the country of export such that sales in that market are not suitable for determining a price under subsection 269TAC(1) then normal value cannot be ascertained under subsection 269TAC(1). The Commission's Dumping and Subsidy Manual (the Manual) provides guidance concerning how normal

value may be calculated when normal value cannot be ascertained under subsection 269TAC(1) and the role played by section 43 (the Manual at section 9.1):

Section 269TAC(2)(c) provides that where the normal value of goods exported to Australia cannot be ascertained under s. 269TAC(1), the normal value of the goods may be constructed.

The key elements in constructing a normal value are:

- the cost of production or manufacture of the exported good – the term cost to make has been used throughout this chapter.
- the, selling, general and administrative costs are those that would be incurred on the assumption that the exported good is sold on the domestic market; and
- an amount for profit.

The cost to make is worked out in accordance with Regulation 43 of *Customs (International Obligations) Regulations 2015*. The selling, general and administrative costs are worked out in accordance with Regulation 44 of the regulations; and the profit is worked out in accordance with Regulation 45 of the regulations. Sections 269TAC(5A) and (5B) also refer.

Subsection 43(2) of the Regulation provides that where certain conditions are all met the Minister must work out the cost to manufacture or produce the goods using the information set out in an exporter's records. One of these conditions is that the exporter's records must reasonably reflect competitive market costs associated with the production of the goods. In circumstances where the exporter's records do not reasonably reflect competitive market costs the Commission may work out the relevant amount otherwise than by using the information set out in the exporter's records, including where appropriate by use of benchmark prices for inputs to production of the goods (see the Manual at section 9.3). In practice, where some or all of the factual basis for finding a market situation is that artificially low raw material costs are distorting the price paid or payable for the finished goods, those low raw material costs may also support a finding that those particular costs as recorded in an exporter's records do not reasonably reflect competitive market costs. This typically arises where the low raw material costs represent a high proportion of the CTMS of the finished product.

Appendix 2 of TER 239 sets out the Commissioner's reasons for finding that there was a market situation in the Chinese market for PV panels. Having found that a particular market situation existed in the Chinese PV panels market the Commission calculated normal values under paragraph 269TAC(2)(c) of the Act. Appendix 3 of TER 239 sets out the Commissioner's reasons for finding that the records of Chinese producers of PV panels do not reasonably reflect competitive market costs and the Commissioner's determination that the cost of PV cells, which comprise most of the cost of producing PV panels, should be replaced by a non-Chinese benchmark price. As the Commission notes above in section 4.2.3.3, an external benchmark price was used for PV cells (these comprise a large part of the cost of PV panels) in determining normal values and so a large part of the constructed costs of production would reflect average finance costs outside of China.

In any event, for the reasons given above in section 4.2.3.3 the Commission considers that Tindo's calculations would significantly overstate any effect of increased interest

rates. The Commission observes that Tindo's claim that increasing Chinese PV panel producers' finance costs by between 5.2 and 7.7 per cent would increase normal values by between 5 and 7 per cent implies that almost all Chinese PV panel producers' costs are finance costs.

6.2 Corporate costs

6.2.1 Tindo

Tindo reiterated requests made in earlier submissions that the Commission address the allocations of depreciation, capital expenditure and other development costs from the parent and relevant subsidiary accounts and that these costs should be included in the construction of normal value.

6.2.2 The Commission's assessment

As noted above in section 4.2.1.5 the issue of corporate costs has been raised previously and addressed by the Commission. The Commission remains satisfied that it appropriately tested and accounted for all relevant transactions in relation to inter-company transactions between subsidiaries and parent companies of the four verified exporters.

Tindo has not provided further information or evidence that would cause the Commission to revisit its previous finding on corporate costs.

6.3 Profit used in the normal value calculations

6.3.1 Tindo

Tindo submits that the rate of profit used in constructing normal values for PV panels should be the percentage profit achieved on sales in the ordinary course of trade using the cost to make and sell before the PV cells benchmark was applied.

6.3.2 The Commission's assessment

The Commission's normal practice is that the rate of profit used in constructing normal values is the percentage profit achieved on sales in the ordinary course of trade using the cost to make and sell before a benchmark is applied. The Commission did not depart from this practice in relation to determining the rate of profit to be used in constructing normal values for PV panels.

The Commission notes that this issue has not been previously raised by Tindo or any other interested party in the current investigation; neither was the issue raised before the ADRP. Tindo did not offer any basis for its request that the Commission examine the issue.

6.4 End user price undercutting

6.4.1 Tindo

Tindo claims that:

- SEF 239A (Section 8.4.2) was not explicit or clear that the weighted average price undercutting to the end user level of trade of 20 per cent was only on the solar panel portion of the price;
- The Commission clarified in SEF239A that the 20 per cent was only attributable to the solar panel portion of the end user level of trade; and
- The 6 per cent end user dumping impact calculation is new information.

Tindo questions how the Commission came up with the number of 6 per cent stating that if the installer mark-up was only on PV panels then the PV panels have been disproportionately affected. Tindo claims that the price difference at the end-user level of trade should be 11 per cent.

6.4.2 The Commission's assessment

Price undercutting of installed PV panels in SEF 239 was clear

SEF 239A does not contain a section 8.4.2. The Commission considers that Tindo's submission should rather have referred to section 8.4.2 of SEF 239. Section 8.4.2 of SEF 239 provides price undercutting analyses at different levels of trade, including at the end-user level of trade. On that basis the Commission understands Tindo's claim may be that section 8.4.2 of SEF 239 was not explicit or clear that the weighted average price undercutting at the end user level of trade of 20 per cent was only on the PV panel portion of the price.

However, section 8.4.2 of SEF 239 expressly states that the weighted average price undercutting analysis at the end user level of trade was on *installed* prices. SEF 239 considered sales by importers to end users "inclusive of installation" and found that those prices "undercut Tindo's *installed price* by between 11 per cent and 28 per cent" (emphasis added) with a weighted average price undercutting of approximately 20 per cent (section 8.4.2 of SEF 239 refers).

SEF 239A did not attribute 20 per cent undercutting only to the solar panel portion of end-user prices

Tindo is incorrect in claiming that the Commission clarified in SEF 239A that the 20 per cent undercutting at the end-user level of trade was only attributable to the solar panel portion of the end-user prices. The Commission expressly stated in SEF 239A that "the 20 per cent price undercutting figure in SEF 239 is expressed as a percentage of the price of Tindo's *installed* PV panels" (SEF 239A at page 35, emphasis added). This was in contrast to the 21.1 per cent dumping margin "expressed as a percentage of the price of PV panels *at import* (which *does not include the cost of inverters or other components, or installation costs*)" (SEF 239A at page 35, emphasis added). The Commission's analysis is set out above at section 5.2.

6 per cent effect of dumping on end users is not new information

Tindo is incorrect that the 6 per cent effect of dumping on end users is new information. The Commission calculated the 6 per cent effect of dumping on end users using existing verified price data and end-user sales data provided by Tindo. This calculation was undertaken to correct the mathematical error made by Tindo before the ADRP. Tindo made the mathematical error when it claimed before the ADRP that a dumping duty of 21.1 per cent on PV panels at import would fully cure the 20 per cent price undercutting of installed Chinese PV panels. In essence, the mathematical error was that Tindo sought to directly compare percentages of vastly different numbers.

The Commission has corrected for that mathematical error above in section 5.2 by expressing both the dumping margin and price undercutting as percentages of the same number, namely the price of installed Chinese PV panels. The Commission sets out in detail in section 5.2 the reasons why:

- a dumping duty of 21.1 per cent on PV panels at import would increase the price of installed Chinese PV panels by an average of no more than 6 per cent; and
- in order to fully cure price undercutting at the end-user level, the price of installed Chinese PV panels would need to increase by 24 per cent.

Confusion between price undercutting and dumping margins

The Commission notes that there appears to be confusion in Submission 180 as to the difference between price undercutting and dumping margins. In this respect the Commission notes that Tindo's submission on the 20 per cent price undercutting figure is entitled "end user dumping margin". However the Commission has not at any stage calculated a number that could be called or described as an "end user dumping margin".

It would be an error to calculate a dumping margin at the end user level because installed PV panels are not the goods under consideration. Installed PV panels include components other than PV panels and, significantly, the costs of installation. The Commission calculated price undercutting at the end-user level, not a dumping margin. The Commission considers that this confusion may have been the cause of the mathematical error made by Tindo before the ADRP.

Tindo's calculations

The Commission has reviewed Tindo's calculations of the effect on end users of the weighted average dumping margin found by the Commission in TER 239. The Commission considers that the analysis by Tindo is likely to be unrepresentative, as it uses the price of a single model by a single supplier at one point in time (July 2012). The Commission also considers that the calculation overstates the effect of dumping on the end-user level of the market. The overstatement of the effect of dumping in Tindo's calculation may arise from the following:

- The calculation uses list prices for a PV panel. List prices tend to be a starting point in pricing and actual selling prices will generally be lower. The Commission's verified data used prices from actual transactions. Using a list price will tend to overstate the PV panel price per watt and effect of dumping.

- The price is taken from a July 2012 price list. It is common ground that the highest prices during the investigation period were in July 2012 (Figure 2 above and Submission 180, page 9 refer). The Commission used weighted average prices from the whole investigation period. Using a price from July 2012 will tend to overstate the PV panel price and the effect of dumping.
- The price list is an Australian list price and so the prices are likely to reflect costs that should not be included in the free on board (FOB) export price, such as shipping and landing costs. Using a price that includes such costs will tend to overstate the PV panel price and effect of dumping.

6.5 Causation and causation factors

6.5.1 Tindo

Causation factors and Ministerial Direction

In Submission 180, Tindo sets out two of the ten causation factors from subsection 269TAE(1) of the Act: the size of dumping margins and the quantity of goods exported to Australia. Tindo notes findings by the Commission that dumping margins ranged between 16.1 and 38.8 and the volume of dumped goods (in percentage terms) ranged between 80 and 89 per cent of the Australian market.

Tindo also noted the directions in the *Ministerial Direction on Material Injury 2012* dated 27 April 2012 (Ministerial Direction) that injury caused by other factors must not be attributed to dumping and that dumping need not be the sole cause of injury.

Price effects: dumped DC PV panels installed as AC PV panels

Tindo makes a new claim in Submission 180. Tindo's new claim is that its main competition is from dumped DC PV panels exported from China that are fitted with micro-inverters in Australia and installed as AC PV panels (Submission 180 at page 6) and the effect of these should not be compared with the effect of DC PV panels or AC PV panels. Tindo contends that (Submission 180 at page 7):

...a sound and reasonable analysis of the price advantage of the goods from China versus the pricing of the Australian industry would necessarily incorporate a comparison of the pricing of like with like.

On the basis that like should be compared with like Tindo proposes that the Commission should make a comparison of a number of differently configured PV panels and PV panels at both the wholesale and end-user level. Tindo claims that, without this analysis, it is not reasonable to come to a conclusion that the contribution of dumping to the price advantage of imported panels is negligible. (See Submission 180 at page 7.)

6.5.2 Trina

Trina considers that the Commission in SEF 239A has very thoroughly followed up on the ADRP's reasons for revoking the Commissioner's earlier termination of Investigation 239.

6.5.3 CCCME

The CCCME noted that the ADRP considered that the analysis previously undertaken by the Commission did not support the required positive state of satisfaction that injury caused was negligible in order to terminate the investigation.

The CCCME considers that the Commission has in SEF 239A (including by reference to the Colmar Brunton end-user survey) thoroughly and transparently considered the issues raised by the ADRP.

6.5.4 The Commission's assessment

Causation factors and Ministerial Direction

The Commission notes Tindo's comments in relation to the causation factors highlighted by Tindo. The Commission notes that the Parliamentary Secretary may have regard to these, and other, factors in determining whether material injury has, is or would be caused. In the current inquiry the Commission has found strong evidence in the coincidence analyses (section 5.3 above refers) and Colmar Brunton end-user survey (section 5.4 above refers), notwithstanding the size of dumping margins and the quantity of goods exported to Australia, that there is no or negligible injury caused by dumping.

The Commission also notes that subsection 269TAE(1) is subject to subsection 269TAE(2A), which states that the Parliamentary Secretary must consider whether injury is being caused by a factor other than the exportation of dumped goods and such injury must not be attributed to the exportation of those dumped goods. In the current inquiry the Commission has found that, to the extent that Tindo is suffering injury that injury is due to other factors such as the significant price difference between Australian and Chinese PV panels (to which the contribution of dumping is negligible). TER 239 summarises other factors that the Commission considers contributed to any injury suffered by Tindo (TER 239, section 8.7 refers).

Tindo correctly notes the statement in the Ministerial Direction that dumping need not be the sole cause of injury. However, even where dumping is not the sole cause of injury, the dumping must nonetheless cause injury that is material for measures to be applied. Where the Commissioner is satisfied that the injury caused by dumping is negligible, as is the case in this investigation, then the Commissioner must terminate the investigation.

Price effects: dumped DC PV panels installed as AC PV panels

Tindo has not previously stated that its main competition is dumped DC PV panels installed as AC PV panels. Neither has Tindo previously proposed, as it now does, that differently configured PV panels are not like goods and should be separately assessed. This would be contrary to findings in SEF 239 which considered DC PV panels and AC PV panels to be like goods (SEF 239, section 3.5). Tindo did not raise an issue with the Commission's findings on like goods in SEF 239. In any event, the Commission notes that there is no provision enabling any amendment to the description of the goods the subject of an application made under section 269TB after that application has been accepted and a public notice given initiating an investigation under section 269TC.

The Commission also notes that the new analysis proposed by Tindo was not previously raised nor was it put before the ADRP. The Commission's assessment in the resumed investigation used the framework of analysis and the price undercutting and dumping margin used throughout the investigation and put to the ADRP by Tindo (after correcting for Tindo's mathematical error). The Commission considers that Tindo's proposed new analysis would cause the resumed investigation to depart significantly from the approach on which other interested parties have made submissions and from what the ADRP envisaged when it revoked the Commissioner's termination.

For the reasons above, the Commission considers that Tindo's proposed new form of analysis is not relevant to the current investigation.

6.6 Assessing causal link: volume injury

6.6.1 Tindo

Volume injury

Tindo notes that it started business at the start of the investigation period and its volumes grew over the investigation period. Tindo makes a number of other comments explaining some of the movements in its volumes over the investigation period.

Tindo provides a correlation analysis of Chinese PV panel prices against Tindo's wholesale volumes. Tindo claims that this correlation analysis shows how the "Chinese price collapse in early 2012 resulted in the death of the Tindo wholesale business".

Tindo also claims that SEF 239A is "completely silent" on the small selection of transactions provided by Tindo in its application showing actual lost sales to imports from China. Tindo claims that this information has been disregarded by the Commission.

Coincidence analysis

Tindo makes submissions on the Commission's coincidence analysis. Tindo claims that there are a number of reasons why a negative correlation would not be evident in the volume data and that the small selection of transaction examples it provided should suffice as evidence of injury.

Tindo considers that Figure 1 in SEF 239A is "grossly misleading" because Tindo's and imported volumes are graphed on different scales (although Tindo concedes that SEF 239A states that the scales are different).

Tindo states that it is not surprising that there is no clear relationship in the correlation analyses given that Tindo is a "young SME that commenced operating at the start of the investigation period".

Comparison of Tindo's and imported volumes

Tindo notes that its volumes are small compared to the whole Australian market for PV panels. On that basis Tindo submits that it is unreasonable and unrealistic to expect Tindo's sales volumes to be impacting import volumes for the exporters investigated by the Commission.

Tindo questions whether the four selected exporters investigated by the Commission are representative of the total volume of imports from China given that these exporters comprised only about 28 per cent of total import volumes from China.

Comparison of Tindo's volumes and imported prices

Tindo claims that its growing volumes, at its low market share, are not evidence that dumped imports are not causing material injury. Tindo instead proposes that the small selection of transactions it provided to the Commission should be used by the Commission.

Tindo notes the comments of the Industry Economics branch of the Department of Industry, Innovation and Science that limitations in the available data precluded an econometric analysis.

6.6.2 The Commission's assessment

Volume injury

The Commission notes Tindo's comments explaining the movements in its volumes over the investigation period, however Tindo provides no further information or evidence that counters the Commission's finding in SEF 239A and set out above in section 5.3 that there is no correlation consistent with volume injury being caused to Tindo by Chinese PV panels. The Commission notes what Tindo calls a "desperate and puzzling conclusion by the Commission" that Tindo was not injured at the time of a spike in Tindo's sales in December 2012, however the Commission's analysis was not intended to assess whether Tindo was injured in that period but whether the movements of Tindo's sales volumes and import volumes were consistent with volume injury being caused by imports. The spike in both imported volumes and Tindo's volumes in December 2012 is inconsistent with the movement in volumes that would be expected from volume injury (section 5.3 above refers).

The Commission accepts that Tindo's wholesale volumes to third parties fell during the investigation period, however the Commission considers that this fall was due to Tindo vertically integrating into the retail level of the PV panels market. In effect, Tindo continues to supply at the wholesale level of trade to itself. Accordingly, the Commission considers that Figure 2 above, which includes all of Tindo's volumes, provides a better basis for assessing volume injury.

Tindo does not provide a source for the Chinese price data that is graphed on page 9 of Submission 180 and the horizontal axis of that graph does not state which time periods are being assessed. The Commission considers that the graph on page 9 of Submission 180 was intended to show that prices for Chinese PV panels:

- were static during July and August of 2012;
- fell quickly during the period from September 2012 to November 2012; and
- were relatively static from December 2012 until 3 months from the end of the investigation period at which time they increased slightly.

However, Tindo's data for the price of Chinese PV panels is at odds with verified data held by the Commission and graphed in Figure 2 above. Figure 2 shows Chinese PV panel prices falling gradually from the start of the investigation period, with a pause in

October 2012, until their nadir in April 2013. Following April 2013, the prices of Chinese PV panels increase gradually until the end of the investigation period.

Tindo provided evidence of a small selection of transactions in its application and during the course of the investigation, which Tindo claims as evidence of injury. The coincidence analyses in section 5.3 above, which draw on all of Tindo's transactions and transactions of the selected PV panel exporters, are stronger evidence and show that dumped PV panels are not causing injury to the Australian industry. In any event, SEF 239A is not silent on the small selection of transactions provided by Tindo: Tindo provided an analysis of those transactions prior to SEF 239A being published (Tindo's Submission 164 refers), however the Commission found significant errors in that analysis (section 4.1.6.4 above refers) and accordingly could not rely on it as evidence that dumped imports of PV panels had caused material injury to Tindo.

The Commission makes the following further comments concerning the small selection of transactions provided by Tindo:

- Tindo won the work for four of the six transactions provided. Tindo claims that it suffered injury from those four transactions because it was competing against prices of dumped goods. The Commission has calculated the injury attributable to the dumping of PV panels arising from those four transactions to be less than a third of one per cent of Tindo's revenue over the investigation period.
- The two transactions for which Tindo lost work account for a very small proportion of the PV panel market (less than four hundredths of one per cent). In addition, due to the reasons set out in this report, it is not clear that Tindo would have won this work in the absence of dumping.
- The conclusions that Tindo seeks to draw from the small selection of transactions is counter to the macro evidence in the coincidence analyses undertaken by the Commission (section 5.3 above refers) and the Colmar Brunton end-user survey (section 5.4 above refers). If anything, the Commission considers that the small selection of transactions and the impact on Tindo tends to confirm other evidence that injury caused by Chinese PV panels is negligible.

Coincidence analysis

The Commission notes Tindo's claims concerning why there might not be a negative correlation evident, however the Commission reiterates its view, based on WTO jurisprudence (section 5.1 above refers), that any other method to show causation will require a compelling explanation as to why causation exists notwithstanding the absence of any. The Commission considers that the small selection of transactions provided by Tindo does not comprise a compelling explanation of causation.

The Commission does not accept that Figure 1 is grossly misleading as claimed by Tindo. The purpose of Figure 1 is not to compare the levels of Tindo's and imported volumes but to examine the extent to which there is coincidence of movement between those variables. The Commission makes that point expressly in section 5.3 above.

The Commission notes Tindo's statement that there is no clear relationship in the coincidence analyses, however the Commission notes that there is a clear relationship

in the first eight months of the investigation period. That relationship is clearly evident in Figure 1 above. That relationship shows a clear positive correlation between Tindo's and imported volumes, the opposite of what would be expected if Tindo was being injured by dumped Chinese PV panels. As noted in section 5.3, it seems likely during this period that both imports and Tindo's volumes were responding to some other common factor in the market. Figure 1 nonetheless is confirmed by the finding of the Colmar Brunton end-user survey, that demand for Tindo's PV panels is highly unresponsive to Chinese PV panels.

Comparison of Tindo's and imported volumes

The Commission accepts that Tindo's volumes are small however if Tindo was being injured as claimed by Tindo then it would nonetheless be reasonable to expect some correlation. The Commission accepts Tindo's submission that it is unreasonable to expect Tindo's sales volumes to impact exporters' volumes however that is not the direction of causation that is relevant to the current investigation. Rather, the Commission is concerned with the impact of dumped imports on Tindo's volumes. The Commission considers that the evidence described above, namely the Colmar Brunton end-user survey and the coincidence analyses, makes it clear that that impact is negligible.

The Commission notes Tindo's comments concerning the exporters investigated by the Commission, however it was open to the Commission to select the exporters it did. The legislation is clear, that if the number of exporters from a country of export is so large that it is not practicable to examine the exports of all of those exporters, as is the case in the current investigation, then the investigation may be carried out, and findings may be made, on the basis of information obtained from an examination of a selected number of those exporters who are responsible for the largest volume of exports to Australia that can reasonably be examined (subsection 269TACAA(1)). The exporter sampling notification on the EPR describes the basis for the Commission selecting the exporters it did (Exporter Sampling Notification, 20 May 2014, EPR document 39 refers). Tindo has not suggested any reason why the selection of exporters in the current investigation would not be representative.

Comparison of Tindo's volumes and imported prices

The Commission notes Tindo's claims, however the Commission again reiterates its view, based on WTO jurisprudence, that any other method to show causation will require a compelling explanation as to why causation exists notwithstanding the absence of any coincidence (section 5.1 above refers). The Commission considers that the small selection of transactions provided by Tindo does not comprise a compelling explanation of causation.

The Commission does not consider that data limitations precluding an econometric analysis are necessarily an impediment to the Commission reaching the view it has on the information and evidence available, that the injury, if any, caused by dumped PV panels is negligible.

6.7 Assessing causal link: price injury

6.7.1 Tindo

Tindo claims that the Commission's price injury coincidence analysis does not compare like with like. Tindo submits that a like with like comparison must be undertaken to make a fair price comparison.

Tindo submits that it has, on multiple occasions, provided detailed evidence of transactions in which it competed with dumped Chinese PV panels. Tindo claims these transactions showed that the dumped Chinese PV panels had significant price advantages.

6.7.2 The Commission's assessment

As outlined above in section 6.5.2 the Commission has undertaken the current investigation on the basis that DC and AC PV panels are like goods. That approach has not previously been contested by Tindo. As noted above, the Commission considers that it is not able to change the goods description at this stage of the investigation.

The Commission also notes that Tindo's submission on a causal link to price injury appears to proceed on the basis that the Commission is comparing price *levels* in Figure 3 of SEF 239A. The Commission accepts that dumped Chinese PV panels have significant price advantages (although the Commission has found that contribution of dumping to this price advantage is negligible) however the issue is whether price injury has been *caused* to Tindo by dumped PV panels. The Commission is satisfied that that injury is negligible on the basis of the evidence described above, namely the coincidence analyses in section 5.3 and the Colmar Brunton end-user analysis described in section 5.4. Tindo did not address the issue of causation in this part of Submission 180.

6.8 But-for causation assessment and contract evidence

6.8.1 Tindo

Tindo submits that its 2013 customer survey and its selection of six "real hard data case studies" of transactions where it competed with Chinese PV panels provide evidence of a direct link to injury.

Tindo undertakes a close reading of part of section 5.1 of SEF 239A in which it claims that SEF 239A "quoted verbatim [from] the Manual". Tindo observes that a paragraph of section 5.1 of SEF 239A inserts additional words, not in the Manual, that Tindo claims misquotes the Manual, misrepresents the Commission's position, "clearly changes the meaning of the text of the Manual, and is inconsistent with the Commission's established policy and practice".

6.8.2 The Commission's assessment

The Commission provides the Manual as guidance for parties accessing Australia's anti-dumping system. As such the Manual is not intended to be immutable, nor is it intended to form part of the statutory regime governing anti-dumping in Australia.

The Manual is necessarily prepared at a high level of generalisation to provide guidance for the majority of cases. Section 5.1 of SEF 239A is based largely on chapter 21 of the Manual, however in drafting section 5.1 of SEF 239A the Commission has found it necessary to elaborate upon certain aspects of chapter 21 of the Manual that are applicable to the current investigation.

In particular, the Manual states that evidence that dumped goods won contracts because of price advantages “*may* establish a direct link to the injury experienced” (emphasis added). Clearly the Manual anticipates that such evidence will not establish a direct link to injury in all cases. The additional words in section 5.1 of SEF 239A merely clarify one of the circumstances where such evidence would not establish a direct link to the injury experienced. It is reasonable that in circumstances, such as the current investigation, where price advantages are not wholly attributable to dumping, that such evidence would not generally be sufficient to establish a direct link to injury. Such evidence would not generally be sufficient to establish a direct link to injury caused by dumping because, if it establishes anything, it establishes a link to injury caused by price advantages of which dumping contributes only a part. In the current investigation the Commission has found that dumping contributes only a negligible part of the price advantage enjoyed by Chinese PV panels – even without dumping Chinese PV panels would remain significantly cheaper.

Notwithstanding that Tindo claims to have “hundreds of examples” of discounting or losing sales on price it has only provided a small selection of six such examples. The conclusion that Tindo has requested the Commission to reach based on this small selection of transactions runs counter to the evidence from the coincidence analyses undertaken by the Commission and the end-user survey undertaken by Colmar Brunton. If anything, the Commission considers that the small selection of transactions tends to confirm the other evidence that injury caused by Chinese PV panels is negligible (see the Commissions comments above at section 6.6.2). The coincidence analyses and the Colmar Brunton end-user survey both demonstrate (based on large sample sizes) that Tindo’s sales are highly unresponsive to changes in volumes and prices of Chinese PV panels (sections 5.3 and 5.4 above refer).

The Commission makes the following comments concerning Tindo’s 2013 customer survey:

- The survey appears to be ad hoc with a very small sample size. There does not appear to have been any statistical methodology or reliability testing applied to the sample selection or to the results.
- The survey asked insufficient clarifying questions, however some of the comments from respondents (not all respondents provided comments) reveal important information that does not appear to be taken into account by Tindo. For example:
 - A number of the comments note the large price difference between Tindo and other brands, noting that Tindo had to be close to the price of competitors to get business or that Tindo’s prices were several times the prices of other offerings in the market. As found by the Commission above and in TER 239 the dumping margins determined by the Commission would not close the very significant price differences in the Australian market between Tindo PV panels and Chinese PV panels.

- Some of the respondents in Tindo's 2013 survey compare the price of Tindo's panels to prices of imported PV panels from countries other than China. The provisions of subsection 269TAE(2A) of the Act preclude attributing injury to goods that are not dumped. However one analysis provided by Tindo to the Commission using Tindo's 2013 survey results used some such responses in its calculation of injury.
- A number of the respondents to Tindo's 2013 survey referred to other matters that were affecting Tindo's sales. For example, one respondent made suggestions concerning how Tindo might improve its marketing to gain more sales. The Commission found in TER 239 that Tindo's chosen marketing strategy contributed to Tindo's injury. The ADRP considered but did not disturb the Commission's finding on Tindo's market strategy.
- Tindo's 2013 survey is of Tindo's customers or potential customers at the wholesale level of the market. The Commission observes that: the ADRP specifically sought (at Tindo's insistence) an analysis of and information about the end-user level of the market; and that Tindo has, since part way through the investigation period, shifted its focus to selling direct to end users.

Accordingly, the Commission does not find Tindo's 2013 customer survey to be reliable evidence. The Commission notes however that it provides some evidence that presumably undumped imports from other countries appear to be another cause of injury to Tindo.

6.9 Colmar Brunton end-user survey

6.9.1 Tindo

Tindo claims that the Colmar Brunton end-user survey is unreliable and should not be considered as evidence. Tindo raises a number of concerns it has with the Colmar Brunton end-user survey, however its primary concerns are that: the survey was conducted outside the investigation period; and 31 per cent of respondents believe they have purchased Australian PV panels, which is clearly not correct. Tindo submits that this incorrect belief and that 41 per cent of respondents "claimed to be experts" show that the end-user survey results cannot be relied on.

Tindo also queries how the 6 per cent figure used by the end-user survey was calculated and considers it is "extraordinary" to place heavy reliance on a "vague figure". Tindo submits that the only data that can be relied on is information obtained during the investigation period such as the small selection of transactions provided by Tindo to the Commission.

6.9.2 CEC

The CEC expressed concern that respondents to the Colmar Brunton end-user survey who incorrectly believe they purchased Australian PV panels may have been misled by suppliers of imported PV panels. The CEC stated that it is committed to ensuring that consumers have access to accurate information regarding country of manufacture of PV panels sold in Australia.

6.9.3 The Commission's assessment

The Commission notes that no respondents to the end-user survey claimed to be “experts” as claimed by Tindo. The highest level of knowledge is that the respondent knew “a lot about” PV panels (Colmar Brunton report at page 45) and only 8 per cent of respondents claimed the highest level of knowledge (Colmar Brunton report at page 27). In addition, the Colmar Brunton report does not report on the extent to which respondents who believed their PV panels were Australian made had a high level of knowledge about PV panels – in the absence of such reporting it cannot be assumed that the same respondents who claimed a high level of knowledge also believed their PV panels were Australian made.

In any event, the Commission considers that purchasers of PV panels are most likely to arm themselves with the knowledge and information that is most important to their purchasing decisions. Noting that the Colmar Brunton end-user survey restricted respondents to only those who already have installed, or have seriously considered installing, PV panels, the Colmar Brunton end-user survey results make it clear that the country of assembly is not knowledge that is greatly important to the purchasing decision compared to the primary considerations of price and quality when purchasing PV panels (Colmar Brunton report, section 4.5).

The 6 per cent figure used in the Colmar Brunton end-user survey is explained above in section 5.2 where the Commission corrected the mathematical error made by Tindo in its application to the ADRP. The 6 per cent figure was estimated using the 21.1 per cent dumping margin (based on verified exporter data) and sales information provided by Tindo. The Commission considers that this 6 per cent figure may be an upper limit because it assumes that the full dumping duty would be passed through to end users in the cost of installed PV panels.

6.10 Tindo's end-user survey

6.10.1 Tindo

Tindo has provided the results of an end-user survey conducted by Kevche Pty Ltd (Kevche), which Tindo claims shows that, if the cost of installed Chinese PV panels increased by 6 or 11 per cent, Tindo “would certainly get more business”.

Findings in the Kevche survey results included:

- If a Chinese solar system cost \$12,000 and an Australian solar system cost \$10,000 then 55 of the 57 respondents would purchase the Chinese solar system (Question 1).
- If a Chinese solar system cost \$10,600 and an Australian solar system cost \$12,000 then 44 of the 57 respondents would purchase the Australian solar system (Question 2).
- If a Chinese solar system cost \$11,100 and an Australian solar system cost \$12,000 then 53 of the 57 respondents would purchase the Australian solar system (Question 3).

6.10.2 The Commission's assessment

The Commission understands that Question 2 and Question 3 of the Kevche survey may have been intended to assess respondents' reaction to a 6 and 11 per cent increase in the price of installed Chinese PV panels given the extent of price undercutting at the end-user level identified in SEF 239. However, it appears from Question 2 and Question 3 that Tindo has not fully understood the mathematical error it made before the ADRP. Question 2 and Question 3 appear to be predicated on the price undercutting being 20 per cent of installed Chinese PV panels. However, as explained above in section 5.2, the 20 per cent price undercutting identified in SEF 239 is expressed as a percentage of installed Tindo PV panels. The price undercutting correctly expressed as a percentage of installed Chinese PV panels should be 24 per cent.

In addition to the above, the Commission has significant concerns about the capability of Kevche to conduct a consumer survey and the robustness of the methodology used by Kevche. The Commission observes that the sample size of the Kevche survey is very small. The Commission understands that the smaller the sample size of a survey, the lower the statistical significance and the reliability of the survey's results. It also appears that the respondents to the Kevche survey were not screened to provide a relevant sample, in contrast to the Colmar Brunton end-user survey which screened for a number of characteristics including whether the respondent: was an adult; and owned a home suitable for PV panel installation; and owned or was considering buying PV panels.

Table 1 below sets out a summary comparison of key aspects of the Colmar Brunton end-user survey and the Kevche survey.

Table 1 Summary comparison of key aspects of Colmar Brunton and Kevche surveys

Survey company	Colmar Brunton	Kevche
Sample size	512	57
Relevance of sample	254 respondents have PV panels installed, 258 considering installation of PV panels	5 respondents have solar
Qualifications of survey company	<ul style="list-style-type: none"> • Largest independent Australian owned market research company • Personnel have significant experience in choice modelling, design and implementation of social research, analytical and applied statistics • Research executives are members of the Australian/New 	<ul style="list-style-type: none"> • No information provided • Kevche has no website • Inquiries suggest that the sole director mainly works in fields other than market research

Survey company	Colmar Brunton	Kevche
	Zealand Market Research Society <ul style="list-style-type: none"> • A founding member of the Association of Market and Social Research Organisations (AMSRO) • ISO accredited 	
Transparency	Full and detailed 49 page report provided and placed on the Commission's public record (EPR)	No report provided
Statistical significance and reliability	<ul style="list-style-type: none"> • 95% confidence level • +/- 4.33% margin of error 	No measure of statistical significance or reliability provided
Choice modelling	Choice modelling analysis undertaken, which analyses the importance of price in the purchase decision hierarchy, and the level of price that tips a buyer from imported to Australian products	No choice modelling analysis undertaken
Screening of respondents	Extensive screening of selection for sample to ensure: representative numbers from states and territories; dwelling type is suitable for PV panels; respondent is an adult; respondent is a home owner; respondent is a decision maker for home renovations and improvements; respondent either has or is considering PV panels	No screening undertaken

For these reasons, the Commission considers that results of the Kevche end-user survey cannot be relied upon and that the Colmar Brunton end-user survey provides a more reliable basis for the Commission to assess the effect of dumped Chinese PV panels at the end-user level.

6.11 Evidentiary standard and relevance of the business plan prepared by EY for Tindo

6.11.1 Tindo

Tindo claims that the Commissioner is not entitled to accord less weight to Tindo's business plan for reasons that confidentiality has been claimed over it. Tindo claims that to do so is not consistent with the provisions of section 269ZJ of the Act or established policy and practice. Tindo points out that section 269ZJ provides that the

Commissioner may disregard information where the Commissioner disagrees that the information is confidential unless the information is correct. Tindo claims that under past practice documents such as the business plan fit into a category of not being able to provide a reasonable summary and are allowed to be provided as fully confidential and “had equal regard to”.

Tindo considers it “ridiculous”: that the Commission considers the business plan was found wanting for not predicting Chinese dumping of 20 per cent; and for the Commission to cite Ernst & Young’s disclaimer in the business plan in assessing its reliability.

Tindo considered it was “staggering” that the Commission didn’t seem to understand that, in general, businesses would want to keep a document such as a business plan confidential.

6.11.2 CEC

The CEC notes that Tindo has maintained confidentiality over much of the material relevant to the current investigation. CEC submits that because of Tindo maintaining confidentiality in this way CEC and other parties have not had an opportunity to comment on that material.

6.11.3 The Commission’s assessment

The Commission notes Tindo’s comments concerning the statutory provisions for the treatment of confidential information in section 269ZJ. The Commission does not consider that its treatment of the business plan is inconsistent with those statutory provisions. In particular, the Commission has not at any stage suggested that it would disregard the business plan for the reasons in subsection 269ZJ(5).

However, in duly considering and having regard to the information and evidence available to it, the Commission may form a view as to the reliability of that information or evidence. In circumstances where the Commission forms the view, based on reasonable grounds, that information or evidence is not reliable, then neither the Act nor established policy and practice requires the Commission to rely upon that information or evidence. The Commission formed the view that the business plan is not reliable evidence sufficient to found a counterfactual for the reasons set out above in section 5.8. Those reasons include that Tindo itself made an admission as to the reliability of the business plan and that the business plan contained factual and forecasting errors. SEF 239A does not, as Tindo claims, state that the business plan was found wanting for the reason that it did not predict 20 per cent dumping.

The Commission notes Tindo’s comments concerning what it terms the “boiler plate disclaimer” in the business plan. Tindo’s argument appears to be that the Commission should not use the disclaimer in forming its view as to the reliability of the business plan for founding a counterfactual because it is “standard business practice” to have a disclaimer on such a document. The Commission considers it reasonable to proceed on the basis that Ernst & Young intended that the disclaimer was read with the business plan, and that the content and use of the business plan would be qualified according to the terms of the disclaimer.

The Commission understands that businesses wish to keep certain information and documents confidential and the Commission generally defers to businesses’ claims of

confidentiality. However the Commission notes that: the business plan is now 5 years old; it has been described as “out of date” by Tindo; it has been found by the Commission to contain factual and forecasting errors; and the Australian PV panel market and Tindo’s mode of operation have changed in ways that were not anticipated by the business plan. The Commission considers that providing the opportunity for interested parties to scrutinise and comment on evidence before the Commission, while taking account of legitimate concerns regarding confidentiality, is an important aspect of assessing that evidence in a fair and transparent manner.

6.12 Qualitative features and product differentiation

6.12.1 Tindo

Tindo claims that the qualitative features of Tindo’s PV panels should not have been a surprise to the Commission as Tindo has previously talked about this at length during visits by Commission staff to Tindo’s facilities.

Tindo accepts the Commission’s finding that Tindo produces high quality PV panels and that this is important to Tindo’s viability. However, Tindo claims that, if not for dumping, it would produce PV panels in “vastly larger volumes” and be able to charge a higher price.

6.12.2 The Commission’s assessment

The Commission acknowledges that Tindo has previously claimed that its products are high quality, however the extent of that higher quality became clearer with the significant amount of new information provided to the Commission prior to SEF 239A being published, particularly in Submission 174 provided by Tindo. The likely effect of the resulting vertical product differentiation also became clear, namely that Tindo would be insulated from direct and injurious competition from Chinese PV panels. Tindo itself accepts that this vertical product differentiation is important to its viability.

The Commission does not accept Tindo’s assertion that, if not for dumping, it would produce larger volumes and at a higher price. The Colmar Brunton end-user survey, confirmed by the Commission’s coincidence analysis, put it beyond doubt that dumping has no or negligible effect on Tindo.

6.13 Public interest

6.13.1 CCCME

The CCCME urges the Commission to undertake an assessment of the public interest in applying measures, in particular to assess whether the detriment in the market is offset by the benefit to the market. CCCME calls in support of its submission a 2011 response of the then Commonwealth Government to recommendations made by the Productivity Commission. The Commonwealth Government’s 2011 response indicated that it was considering providing a direction to the then CEO of Customs and Border Protection that would provide for a public interest test.

6.13.2 The Commission's assessment

Australia's anti-dumping legislation does not provide for the consideration of the public interest when assessing whether dumping or subsidisation has caused material injury to an Australian industry.

6.14 Particular market situation

6.14.1 Trina

Trina referred the Commission to the findings of the WTO's Dispute Settlement Body in *European Union – Anti-Dumping Measures on Biodiesel from Argentina* (WT/DS473/R) (the Biodiesel case). Based on that finding Trina submits that the Commission's replacement of exporters' costs of producing PV cells for use in PV panels with external benchmarks is inconsistent with Article 2.2.1.1 of the ADA.

6.14.2 The Commission's assessment

The Commission's practice is to replace certain costs with external benchmarks when it becomes necessary to do so because the exporter's costs do not reasonably reflect competitive market costs. The Commission considers that this approach is open to it under Australian law, namely section 43(2) of the Regulation.

7 FINDING

On the basis of the evidence described and considered in this report, and having regard to the submissions received in response to SEF 239A, the Commissioner is satisfied that:

- the injury to the Australian industry that has been, or may be, caused by the exports of dumped PV panels from China during the investigation period is negligible.

Accordingly the Commissioner must terminate this investigation in accordance with subsection 269TDA(13) of the Act.

Attachment 1 – Colmar Brunton, PV Panel End User Survey



Anti-Dumping Commission. *PV Panel End User Survey.*

Prepared for David Peters, ADC

CB Contact Kirstin Couper, Research Director

Phone (03) 8640 5288

Email kirstin.couper@colmarbrunton.com

Issue Date 24 August 2016

Project # ADC0001

Contents.

Executive summary	5
1.1. Introduction	5
1.2. Key findings	5
2. Methodology	7
2.1. Interpreting This Report	8
3. Introduction	10
4. Findings	11
4.1. The choice process	11
4.2. Awareness and knowledge	27
4.3. Non solar households	29
4.4. Existing solar users	30
4.5. Other choice factors	33
5. Conclusions	38
6. Sample profile	39
Appendix A: quantitative questionnaire	41

Index of Tables

Table 1: Abbreviations used.....	8
Table 2: Gender	39
Table 3: Age.....	39
Table 4: Location.....	40
Table 5: Dwelling type.....	40
Table 6: Home ownership	40

Index of Figures

Figure 1: Simulation 1 – China panels cheapest, Australian most expensive	12
Figure 2: Simulation 2 – Chinese increased one price band on Simulation 1	13
Figure 3: Simulation 2 – Cross price elasticity	14
Figure 4: Simulation 3 – Chinese increased two price bands on Simulation 1	15
Figure 5: Simulation 3 – Cross price elasticity	15
Figure 6: Simulation 4 – German and Australian panels are the most expensive	16
Figure 7: Simulation 5 – Chinese price increased to that of German and Australian	17
Figure 8: Simulation 5 – Cross price elasticity	17
Figure 9: Simulation 6 – All panels share equal price point	18
Figure 10: Simulation 7 – Chinese price increased by one band	19
Figure 11: Simulation 7 – Cross price elasticity	19
Figure 12: Simulation 8 – Chinese price increased to top tier	20
Figure 13: Simulation 8 – Cross price elasticity	20
Figure 14: Simulation 9 – Variable pricing, China and Taiwan produce lower quality	21
Figure 15: Simulation 10 – Chinese price increased one tier on Simulation 9	22
Figure 16: Simulation 10 – Cross price elasticity	22
Figure 17: Simulation 11 – Chinese price increased two tiers on Simulation 9	23
Figure 18: Simulation 11 – Cross price elasticity	23
Figure 19: Simulation 12 – Chinese panels with extra 10 years of product guarantee	24
Figure 20: Overall importance of attributes	25
Figure 21: Overall importance of attributes	26
Figure 22: Knowledge of PV solar panel systems	27
Figure 23: Expected financial return of solar electricity systems	28
Figure 24: Predicted time needed to make a decision on PV solar panels	29
Figure 25: Time taken to make a decision on PV solar panels	30
Figure 26: Solar panel country of origin	31
Figure 27: Issues considered when installing solar panels	32
Figure 28: Features influencing choice of panels	33
Figure 29: Most influential factors in choosing solar panels	34
Figure 30: Elements contributing to a high quality result	35
Figure 31: Elements most contributing to a high quality result	36
Figure 32: Element most important in contributing to a high quality result	37

Executive summary.

1.1. Introduction

Colmar Brunton was contracted by the Anti-Dumping Commission to conduct research into the purchase decision process for photo voltaic solar panels (PV panels).

The objectives of this research were twofold:

1. Develop an understanding of consumers' purchasing decisions concerning installed PV panels. Including consumer attitudes and knowledge of PV solar and the features that they consider to be influential in making their decision.
2. Understand the impact that a small price increase in imported PV panels would have on sales of Australian made PV panels.

The research involved an online survey of n=512 Australians who are either main or joint decision makers in their households and either already have PV panels installed (n=254) or were considering the installation of PV panels (n=258). The research was conducted between Wednesday the 13th of July 2016 and Tuesday the 19th of July 2016.

This report presents the findings of this research.

1.2. Key findings

The purchase decision

In order to determine the role of price in the PV solar purchase decision, a choice experiment was conducted to control for a number of different variables. It was designed to ascertain an accurate measure of the importance of country of assembly, product quality and price in the decision making process.

When faced with the choice of a variety of PV solar panel packages we find that country of panel assembly combined with brand is the most important attribute contributing to nearly three fifths (58%) of the choice. Product quality guarantee accounts for a quarter (26%), while price only makes up a sixth (16%) of the choice.

To model the impact of price changes in the market we can consider what happens to consumer choice when we move from a baseline to a scenario where Chinese panels are more expensive. Using the data collected from the study, we reviewed a scenario where Chinese panels are at the lowest possible price point, while Australian panels occupy the top most price point, and panels from Germany, Korea and Taiwan all occupy the middle price point.

We then increase the price of the Chinese panels (by approximately 6%) and find that their individual share of choice drops by 25%, however it is Taiwan's share of choice that benefits increasing by 10%.

while other countries including Australia see smaller gains. In this scenario we also find that Australian assembled panels have the lowest positive cross price elasticity (i.e. are least responsive to changes in the price of Chinese panels).

When price is varied across a range of analytical scenarios we find movement in the percentage increase and decrease of the share of Choice for Chinese assembled panels. However, the decrease in choice moved from Chinese assembled panels to Taiwanese or Korean (most often), and as is seen in the cross price elasticity analysis Australian assembled panels see little benefit from movement in the Chinese price.

Within the brand and country of assembly, Australia (Tindo) had the highest utility (10.8), suggesting they are considered to be a higher quality product. Whereas Chinese and Taiwanese had the lowest utility at -8.0 and -9.1 respectively. Germany was next after Australia (6.9) followed by Korea -0.5). In this context utility is the strength of influence of each individual attribute, therefore the greater the utility the greater the strength of an attribute in the decision.

Knowledge and understanding

The majority of Australians who have PV solar, or have considered it, feel informed about the product; with two fifths (41%) claiming to have high levels of knowledge. Two fifths (43%) believe it will take up to five years to pay for itself, with a further half (47%) believe it will take between five and twenty.

The decision to install PV solar is relatively quick, with the majority doing so in under one year (70%). However, after the decision has been made three in ten (31%) do not know where their panels were assembled. This indicates that for those that have purchased PV solar panels the country of assembly is not always reviewed in detail.

The decision to install PV solar

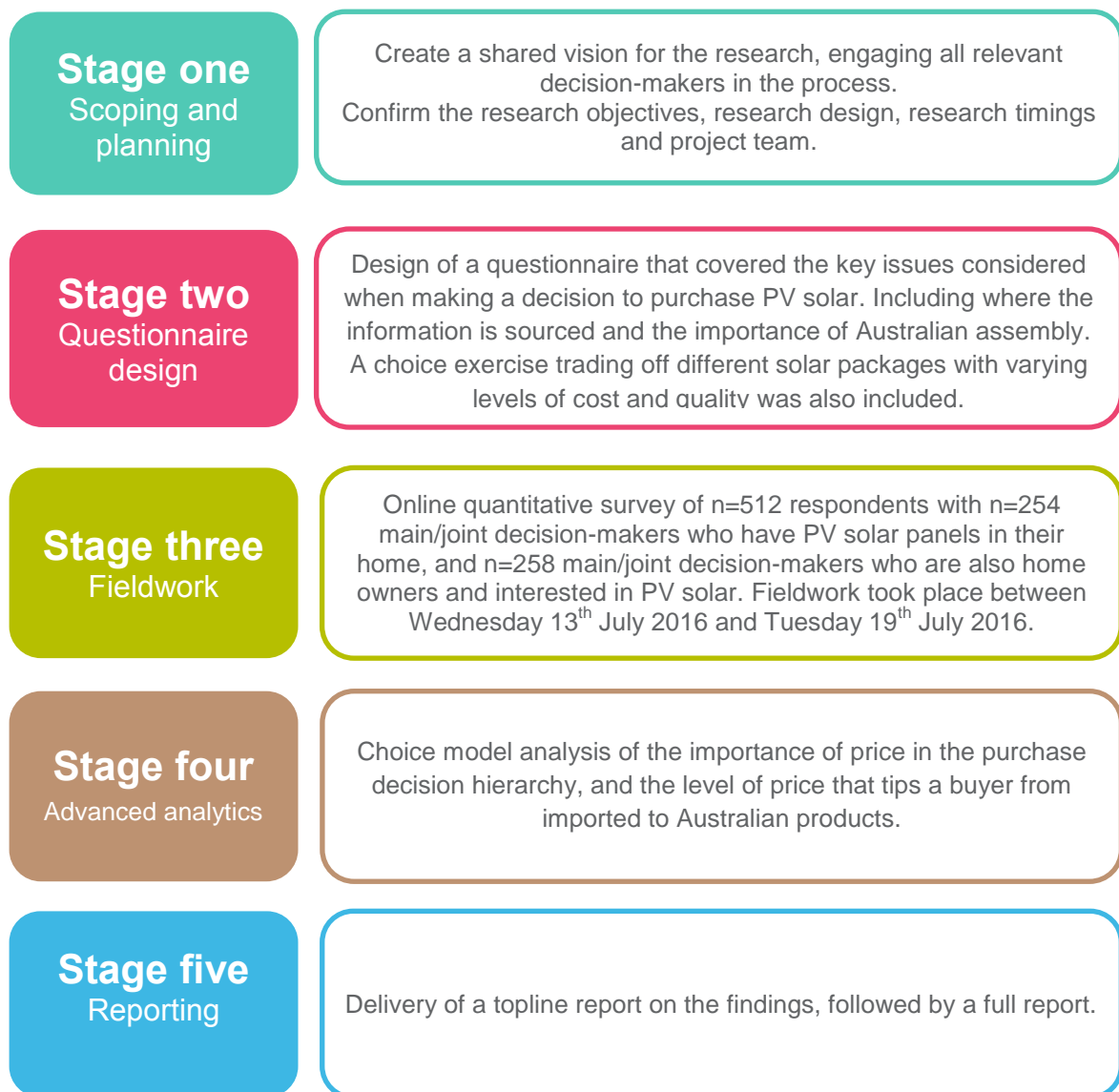
For three quarters of Australians currently with or having considered PV solar the quality of the Panels (74%), and Price (72%) influence the final decision, with the quality of the inverter (58%) and quality of installation (56%) also influential features. This helps us to understand the greater role of quality in the decisions identified by the choice exercise.

When choosing from a list of simple attributes, price comes up as the most influential feature of the decision for a third of consumers (36%), with quality the go to feature for a quarter (25%).

However, although price is identified as they key feature, the choice exercise analysis tells us the level at which cost enters the decision-making process. Once a certain level of quality is obtained, price then becomes relevant. If quality was the same across the choice it would require Chinese panels to be more expensive than their Australian competitors before we see a specific impact on the appeal of Chinese panels - but importantly it is German and Korean assembled panels that would benefit more greatly than Australian – albeit to a small degree.

2. Methodology

The following flow chart summarises the methodological approach that has been undertaken for this study.



2.1. Interpreting This Report

2.1.1. Definitions

The following terms or abbreviations have been utilised throughout this report.

Table 1: Abbreviations used

Term of abbreviation	Definition
SR	Single response
MR	Multiple response
OE	Open ended response
PV panels	Photo voltaic solar panels
Solar households	Households who have/use PV panels in their household, includes those who installed their own systems or those who purchased houses already with PV panels.
Considering solar	Those who are currently or have previously considered installing PV panels on their home.

2.1.2. Percentages and averages

Percentages are rounded to whole numbers. Some percentages may not add to 100 percent due to rounding.

Sorting of results

In all tables, rows are sorted from most frequent response to least.

Tests of Statistical Significance



Tests for statistical significance have been conducted on particular subgroups of interest in this survey, including:

- those who have solar, and
- those who are considering solar.

An exception reporting approach has been undertaken in that if no statistical significance is mentioned, there are none associated with these groups.

Tests have been undertaken at a 95% confidence level. If there is a statistically significant difference between the result for a particular group and the result for the wider population, we can be confident

that this difference has not occurred by chance, rather that it reflects a genuine difference among that group compared to the wider population.

In tables and graphs, the figures with an upwards arrow (i.e. ) represent a proportion that is significantly higher than the subtotal of the other subgroups. Conversely, the figures with a downwards arrow (i.e. ) represent a proportion that is significantly lower than the subtotal of the other subgroups.

Reliability

The margin of error associated with this survey is +/-4.33. This means that if 50% of the sample surveyed expresses a particular sentiment, the true value would lie between 45.67% and 54.33%.

Where sample sizes are low (less than n=50), these are marked by an asterisk (*) in this report. These results should be interpreted with caution.

3. Introduction

Colmar Brunton was commissioned by the Anti-Dumping Commission to assist the Commission in its investigation into the alleged dumping of PV panels exported to Australia from China. This study will help identify whether the 'dumping' of Chinese manufactured PV panels on the Australian market has caused any injury to the Australian industry.

When choosing to purchase PV solar panels consumers rely on information supplied by installation companies, written materials available publicly, and the experiences of others. Previously it was unclear which source of information is deemed most reliable, which is sought first and the role of price in the decision-making process.

When considering the role of price in the purchase decision one of the variables is the cost of the PV solar panels. Currently, installation companies can choose to purchase panels from Australian based company Tindo who will assemble the PV panels (after purchasing the components from overseas), or they can purchase assembled panels from companies based overseas. If price is a key factor in the choice to install PV solar panels it might be that installation companies are choosing to purchase fully assembled panels from overseas to ensure the final price to the consumer is highly competitive. Therefore a key element of this study was to model the role of price in the solar purchasing decision.

4. Findings

4.1. The choice process

In this study we developed a choice exercise to test the importance of specific elements of the PV solar panel purchase decision. This is different from asking people to tell us which elements are most important, as often the relationship between variables can be more complicated than this suggests. Consequently the analysis undertaken for this section of the report helps us to understand the choice decision, and the importance of each factor tested.

In the real world the process of PV solar consumer choice is complex with many variables and varying levels of involvement for consumers. A choice experiment was conducted in order to control for a number of these different variables to ascertain an accurate measure of the importance of country of assembly, product quality and price in the decision making process.

The share of choice represents the likelihood to choose a particular brand/ country of assembly and is not calibrated to market share. Factors such as distribution, trade marketing, salience, quality of sales staff, perceived quality of installation, marketing and promotions remain independent from the model.

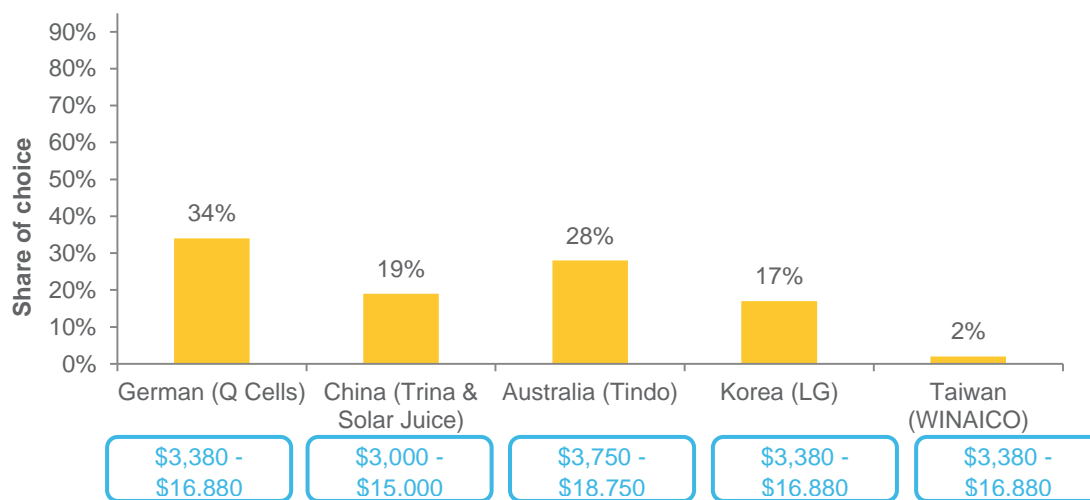
All market simulations unless otherwise noted assume a product quality guarantee of 25 years. The range of prices were individualised to consumers based on their self-reported power consumption; low (2KW), medium (5KW) or high (10KW). Further given multiple variables may have been adjusted between scenarios, comparisons should be limited to simulations contained within their scenarios and not made across different scenarios.

Scenario 1

For our first scenario we set a baseline where Chinese panels are at the lowest possible price point, while Australian panels occupy the top most price point. The panels from Germany, Korea and Taiwan all occupy the middle price point. This results in Germany holding the highest share of choice (34%) with Australia holding a slightly smaller proportion (28%).

It is important to note, that to allow for the isolation of the role of price in the choice decision the model assumes that issues such as marketing efforts and timing of market entry are non-existent. We understand that in-market this is not the case. However, this does not invalidate the findings.

Figure 1: Simulation 1 – China panels cheapest, Australian most expensive

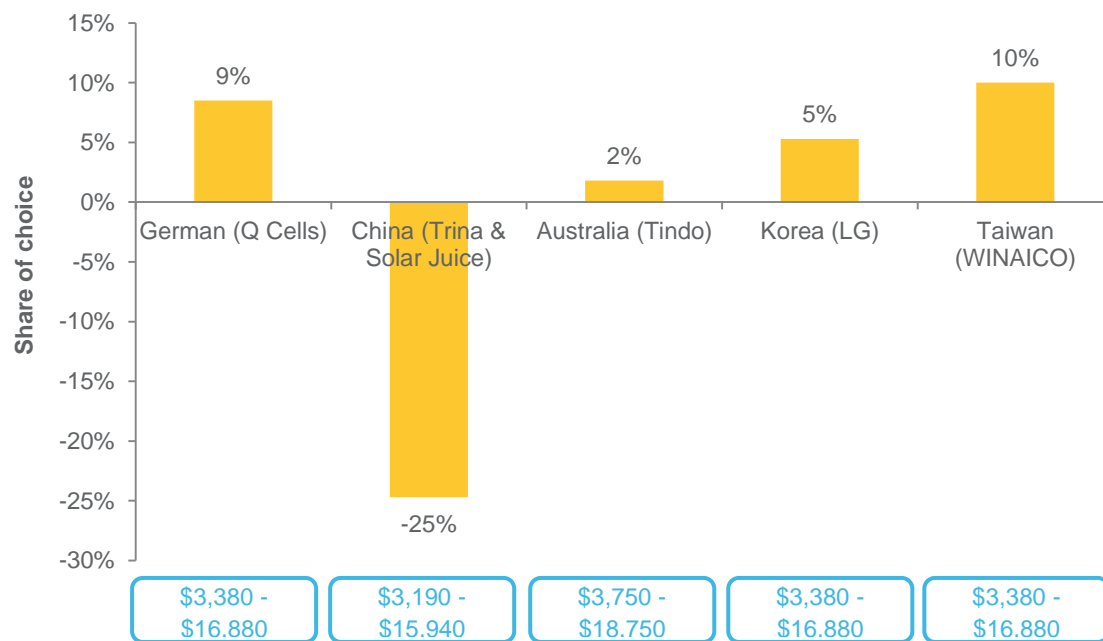


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

It is useful to understand the movement that takes place for a specific country of assembly, in terms of share of choice, when the price changes. By increasing the price of the Chinese panels one tier (approximately 6%) their individual share of choice drops by 25%, however it is Taiwan's share of choice that benefits increasing by 10% while other countries including Australia see smaller gains.

Figure 2: Simulation 2 – Chinese increased one price band on Simulation 1



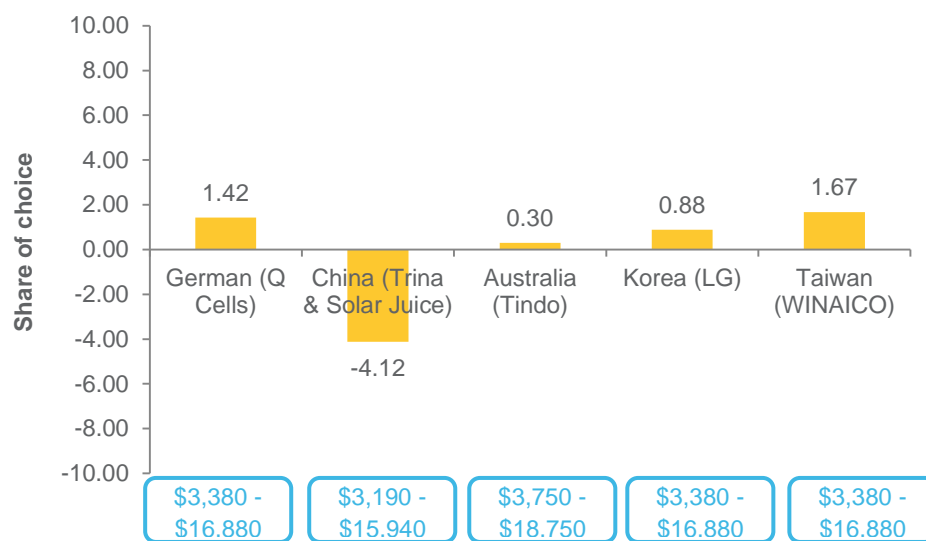
QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

This data can also be analysed in terms of price elasticities; looking at the % change in quantity demanded for specific panels in response to a % change in price of Chinese panels (given by % change in quantity divided by % change in price). The change in demand for a non-Chinese panel in response to the change in price of Chinese panels is a cross price elasticity.

When we analyse the price elasticities we see that the Australian Tindo branded product has the lowest cross price elasticity (i.e. is least responsive to a change in price of Chinese panels).

Figure 3: Simulation 2 – Cross price elasticity

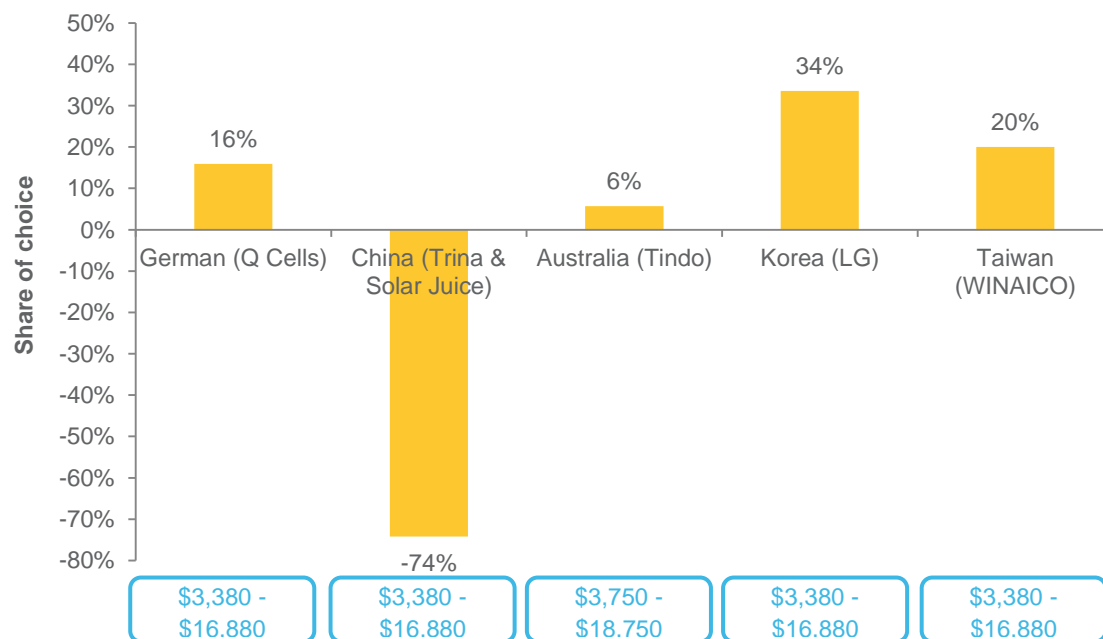


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

By increasing the price of Chinese panels by yet another tier (approximately 12% more than the benchmark) their share of choice decreases significantly by 74% from their baseline in Simulation 1. By levelling the price with Taiwan and Korea these two countries see gains to share of choice, while Australia sees only a small gain to its share of choice (+6%).

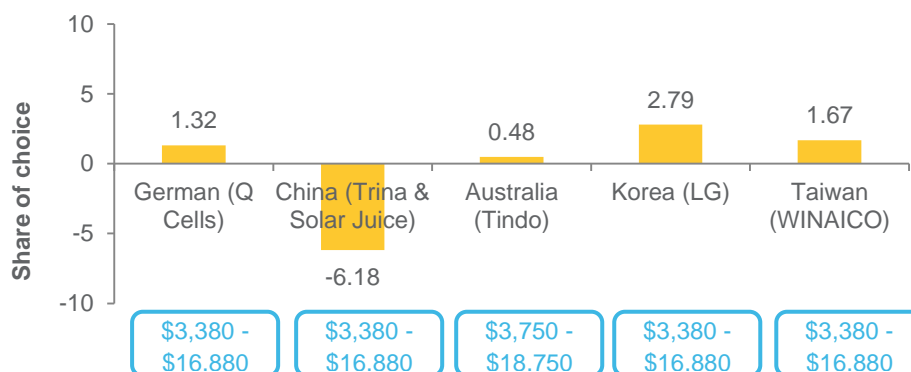
Figure 4: Simulation 3 – Chinese increased two price bands on Simulation 1



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

Again, in terms of cross price elasticity Australia attracts the lowest positive movement.

Figure 5: Simulation 3 – Cross price elasticity

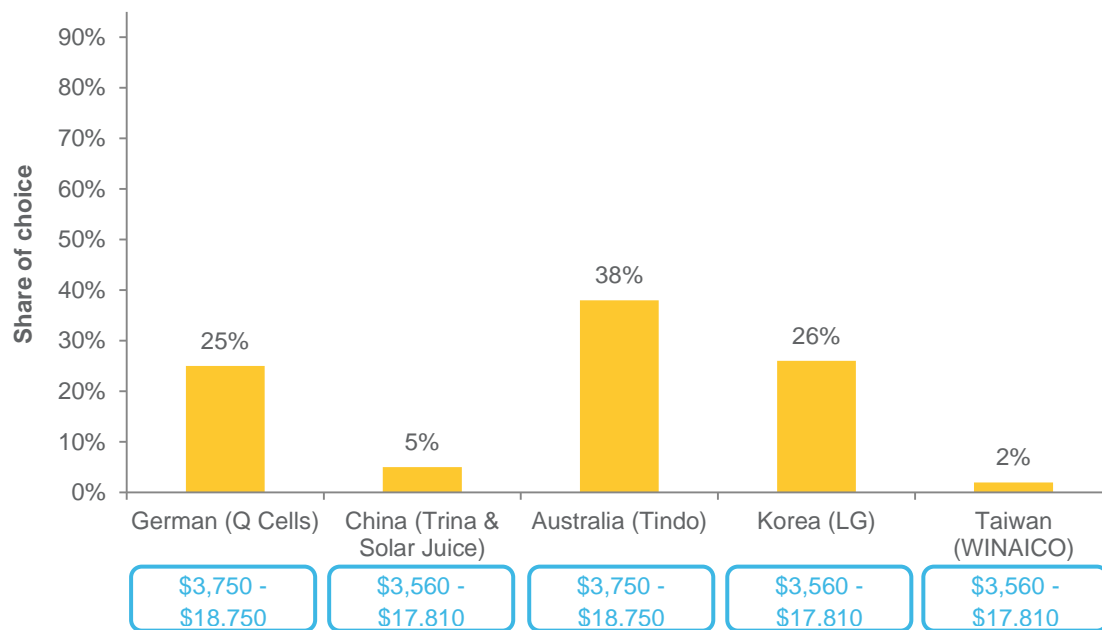


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

Scenario 2

Scenario 2 explores a market where German and Australian panels occupy the top price point while PV panels from China, Korea and Taiwan are approximately 6% cheaper. This results in Australia holding two fifths of the share of choice (38%), while Korean and German assembled panels each hold a quarter of the choice (26% and 25% respectively). China and Taiwan only hold very small proportions of share of choice (5% and 2% respectively).

Figure 6: Simulation 4 – German and Australian panels are the most expensive

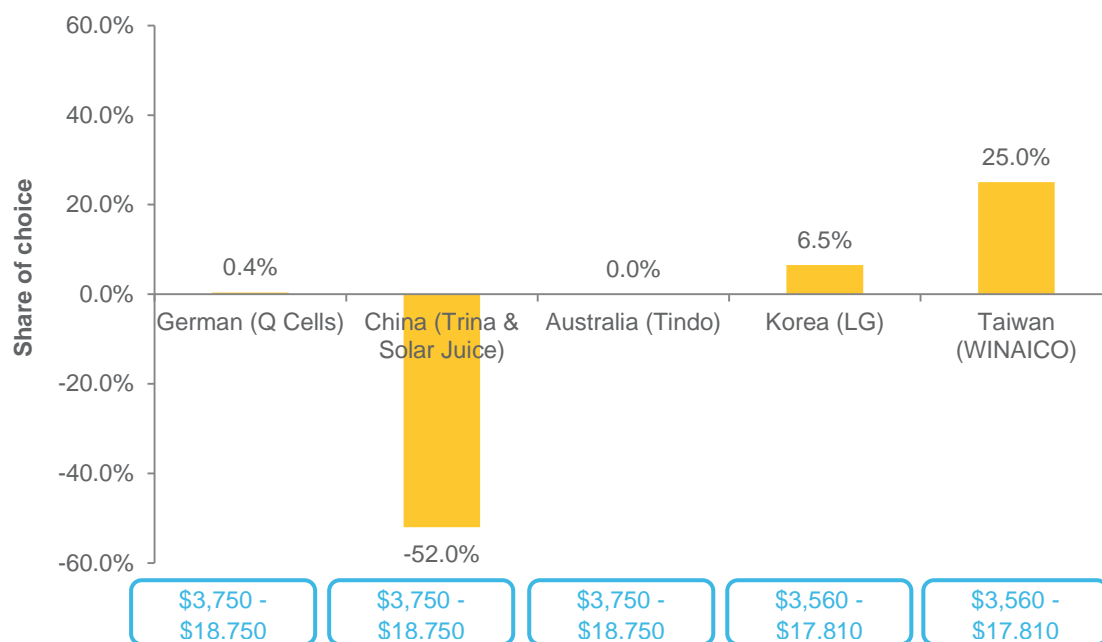


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

Should China's price then be increased approximately 6 per cent its share of choice will decrease by 10.4%, however much like in the first scenario, Australia does not gain from this change. Rather the share of choice predominantly shifts to the Korean and Taiwanese panels which now are the lowest prices in the market. Given that product warranty is fixed across all brands, these consumers are likely to be purely seeking the lowest price.

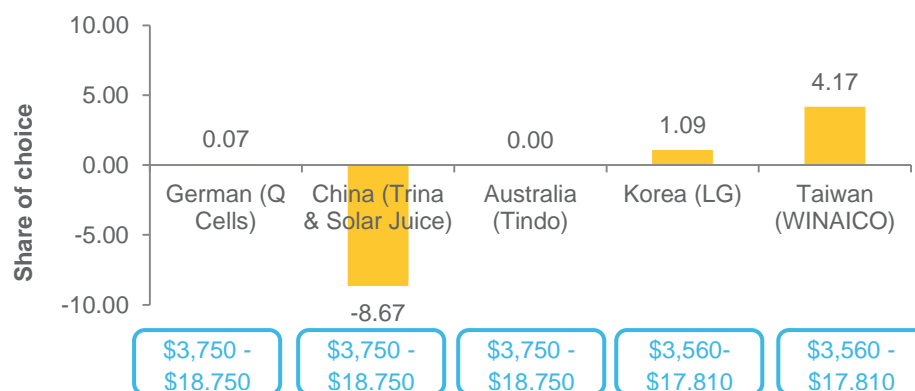
Figure 7: Simulation 5 – Chinese price increased to that of German and Australian



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

Again, in terms of cross price elasticity Australia attracts the lowest positive movement.

Figure 8: Simulation 5 – Cross price elasticity



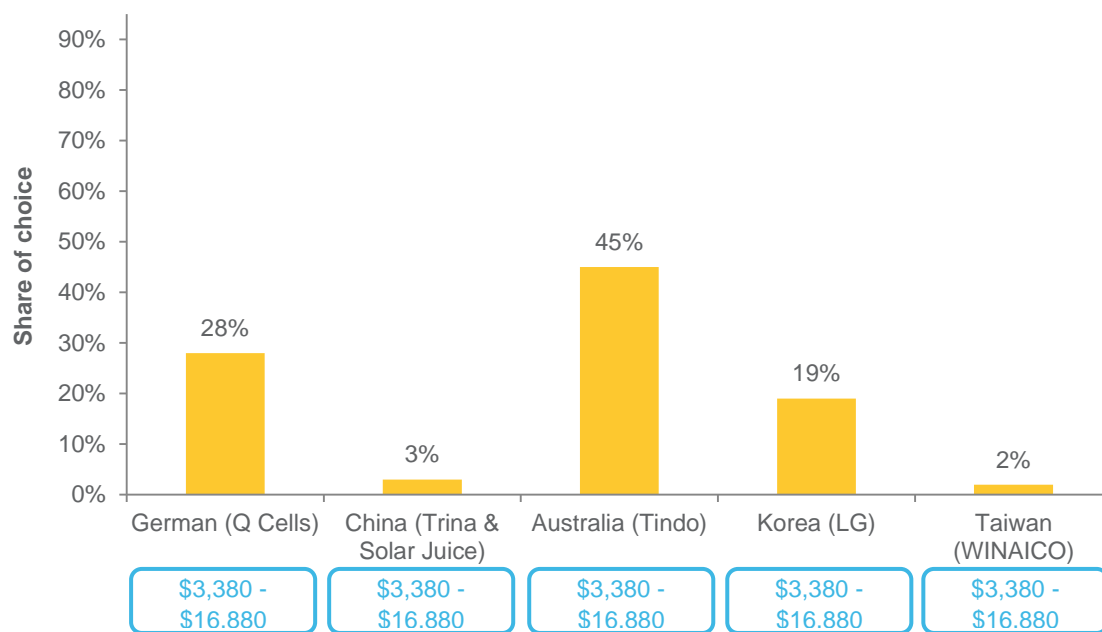
QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

Scenario 3

This simulation depicts a market where all PV solar panels have the same product guarantee (25 years) and panels are evenly priced (\$3,380 - \$16,880, dependant on KW required).

In this situation Australia commands over two fifths of the share of choice (45%), followed by Germany which commands over a quarter (28%). Korean assembled panels hold a fifth (19%) of the share of choice. While China holds only 4 per cent of the share of choice and Taiwan holds the smallest share (2%).

Figure 9: Simulation 6 – All panels share equal price point



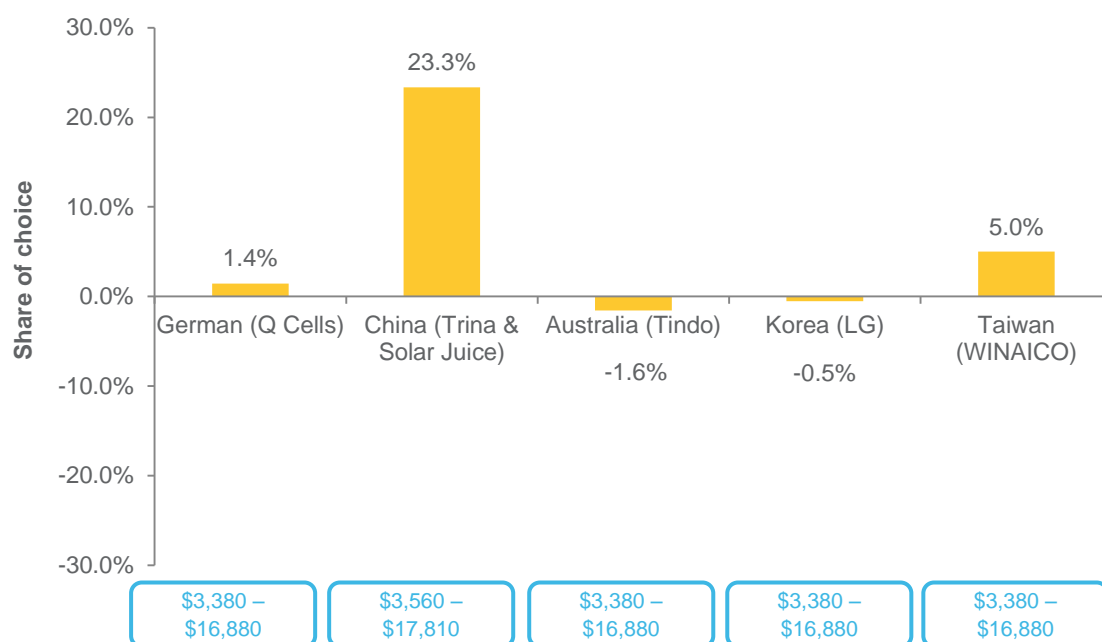
QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

By increasing only the price of Chinese panels by 6 per cent in a market where all other panels are priced on the middle tier, China's share of choice increases by almost one quarter (23.3%). A likely explanation for this is in a scenario where all other variables are held equal, an increase in price represents an increase in quality and therefore be likely to attract a greater share of choice.

This suggests that increasing the price of Chinese panels in this scenario will have little effect on the market as a whole other than to increase China's share.

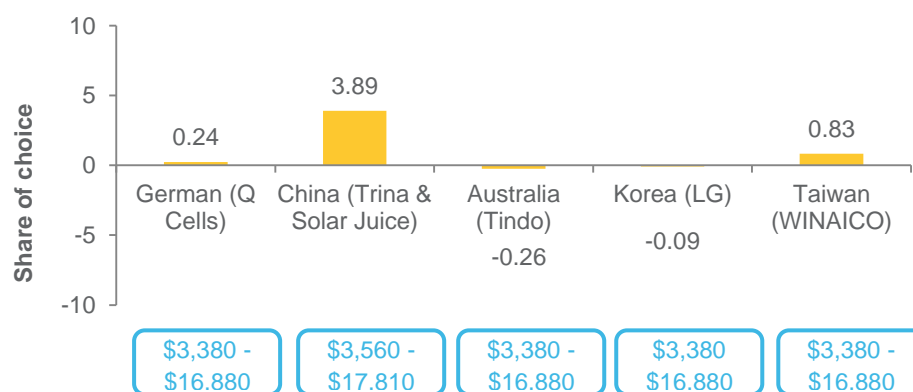
Figure 10: Simulation 7 – Chinese price increased by one band



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

In terms of cross price elasticity, Germany attracts the lowest positive movement.

Figure 11: Simulation 7 – Cross price elasticity

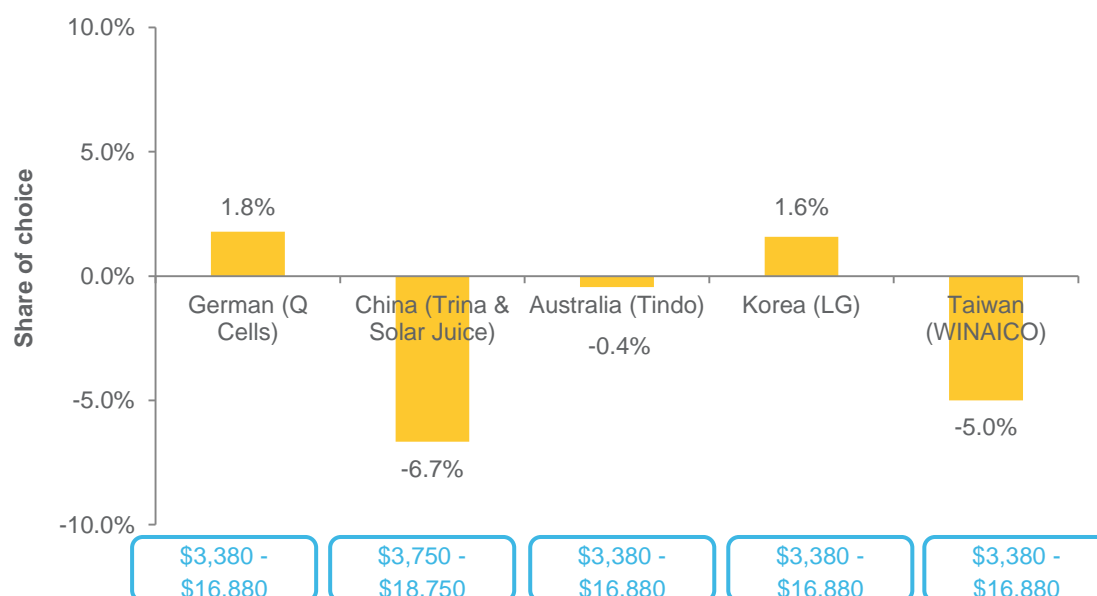


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

In our next simulation we increase the price of the Chinese panels further again, and, as a result the share of choice only fractionally (-6.7%) diminishes for Chinese panels. The share of choice held by Australian panels also drops, although by a smaller percentage.

Therefore this scenario indicates that it may not be possible to put a high enough duty on the Chinese panels in order to decrease their share of choice completely, particularly when all other competing countries offer panels at the same price. If quality was the same across the choice it would require Chinese panels to be more expensive than their Australian competitors before we see a specific impact on the appeal of Chinese panels - but importantly it is German and Korean assembled panels that would benefit more greatly than Australian – albeit to a small degree.

Figure 12: Simulation 8 – Chinese price increased to top tier

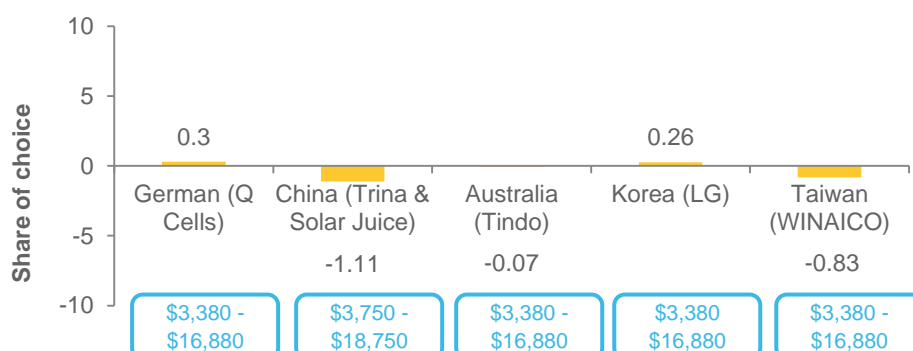


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

In terms of cross price elasticity, Korea attracts the lowest positive movement.

Figure 13: Simulation 8 – Cross price elasticity



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

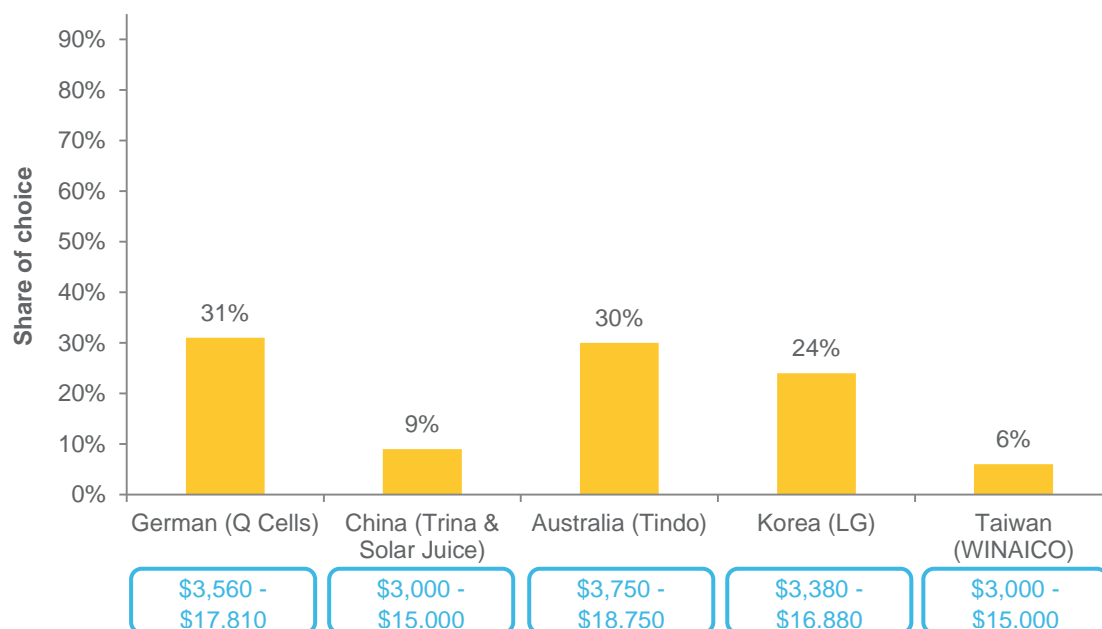
Base: all respondents (n=512)

Scenario 4

The fourth scenario attempts to create a 'price ladder' more reminiscent of reality, where we understand perfect choice does not exist and sales teams often remove some elements of the choice for consumers. Here Australian panels are the most expensive, followed by the German panels, while Korean produced panels occupy the middle price point. Lastly Chinese and Taiwanese panels are the cheapest on the market, however this decreased cost also comes with a reduction in quality, possessing only a 15 year guarantee as opposed to the 25 years that all other brands are offering.

As a result German and Australian panel providers both hold three tenths of the total share of choice each (31% and 30% respectively), while Korea holds a quarter (24%) and China holds just under a tenth (9%).

Figure 14: Simulation 9 – variable pricing, China and Taiwan produce lower quality

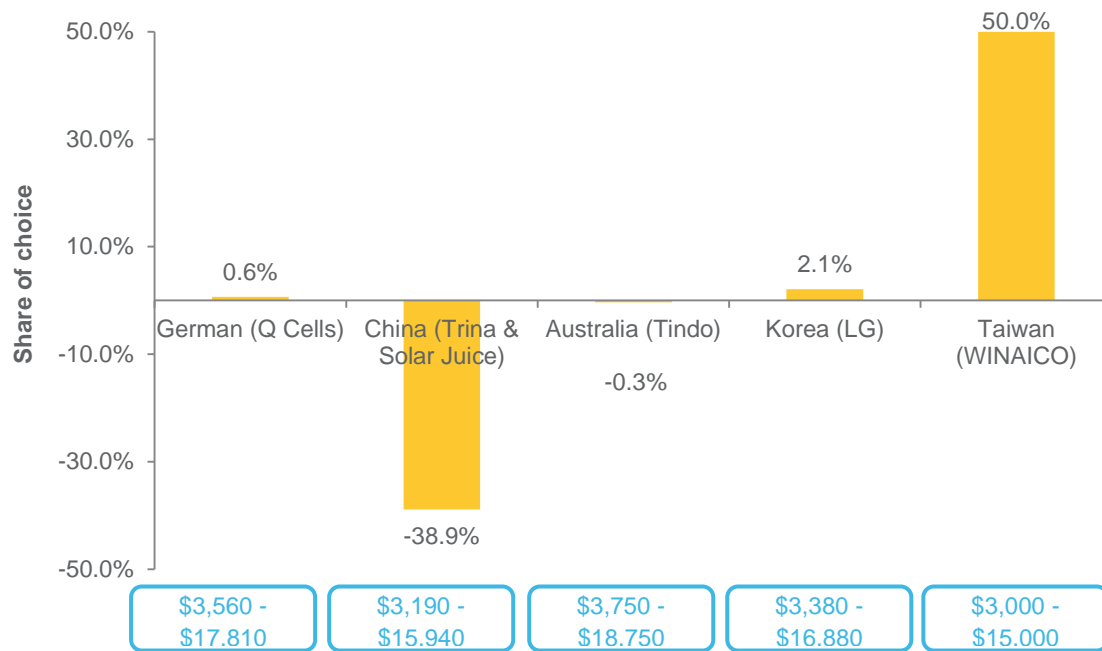


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

As a result of Chinese panels receiving an approximate 6 per cent increase in price, the Chinese lose 38.9% of their share of choice. This result reinforces the conclusion seen in Simulation 5, where following a price increase for Chinese panels the share of choice will predominantly shift to the next lowest price point, in this case the Taiwanese brand. Suggesting that there is a number of price sensitive consumers in the market who are unlikely to switch to an Australian PV panel in the event of a price increase to their preferred Chinese brands.

Figure 15: Simulation 10 – Chinese price increased one tier on Simulation 9

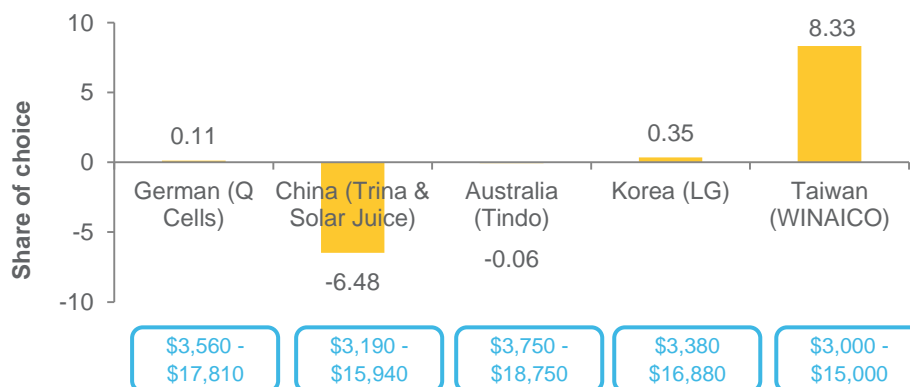


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

In terms of cross price elasticity Germany attracts the lowest positive movement.

Figure 16: Simulation 10 – Cross price elasticity

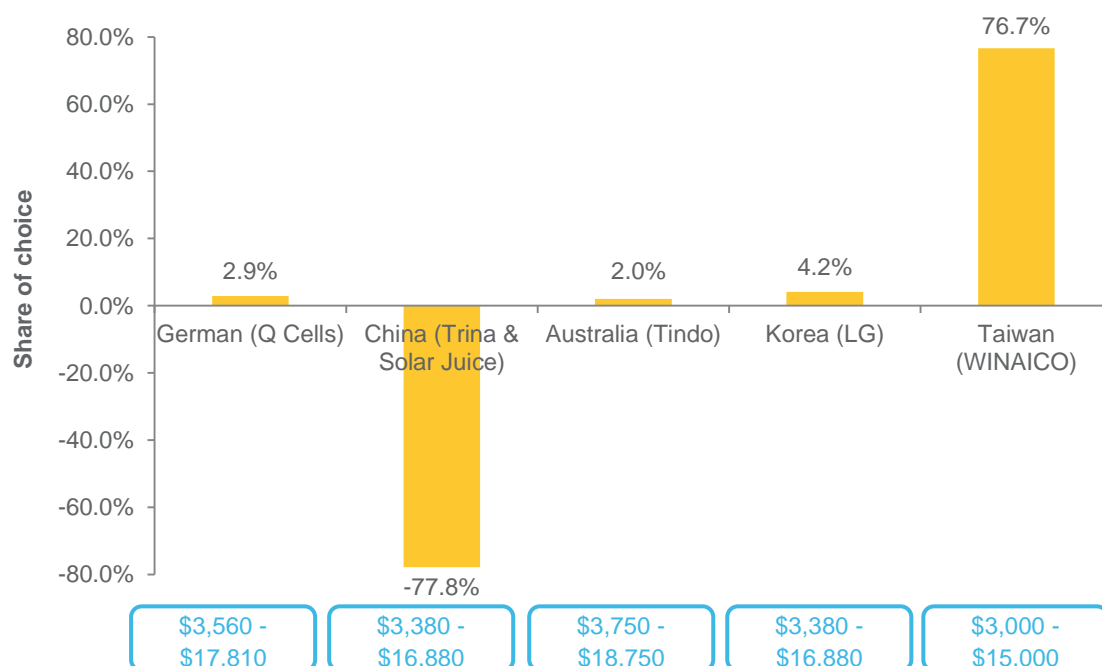


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

By increasing the price of Chinese panels a further 6 per cent the effect previously observed is repeated, China's share of choice drops by over 75%, with Taiwan benefitting in terms of the movement of percentage share of choice. The will in part be explained by the Taiwanese brand possessing the most similar offer to the Chinese panels from Simulation 9.

Figure 17: Simulation 11 – Chinese price increased two tiers on Simulation 9

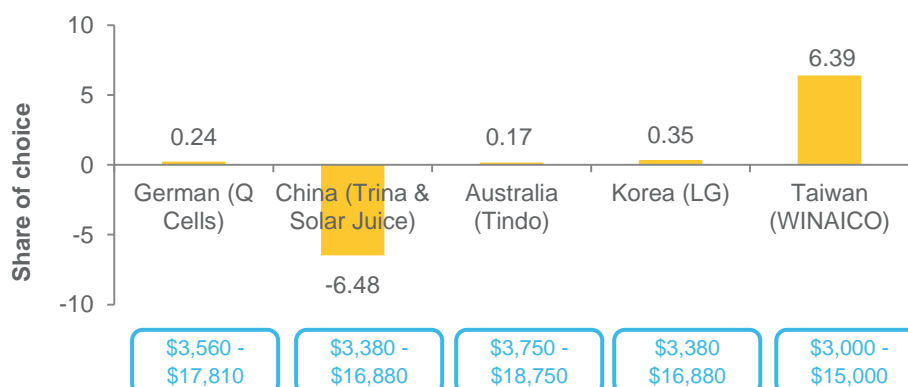


QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

Again, in terms of cross price elasticity Australia attracts the lowest positive movement.

Figure 18: Simulation 11 – Cross price elasticity



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home?

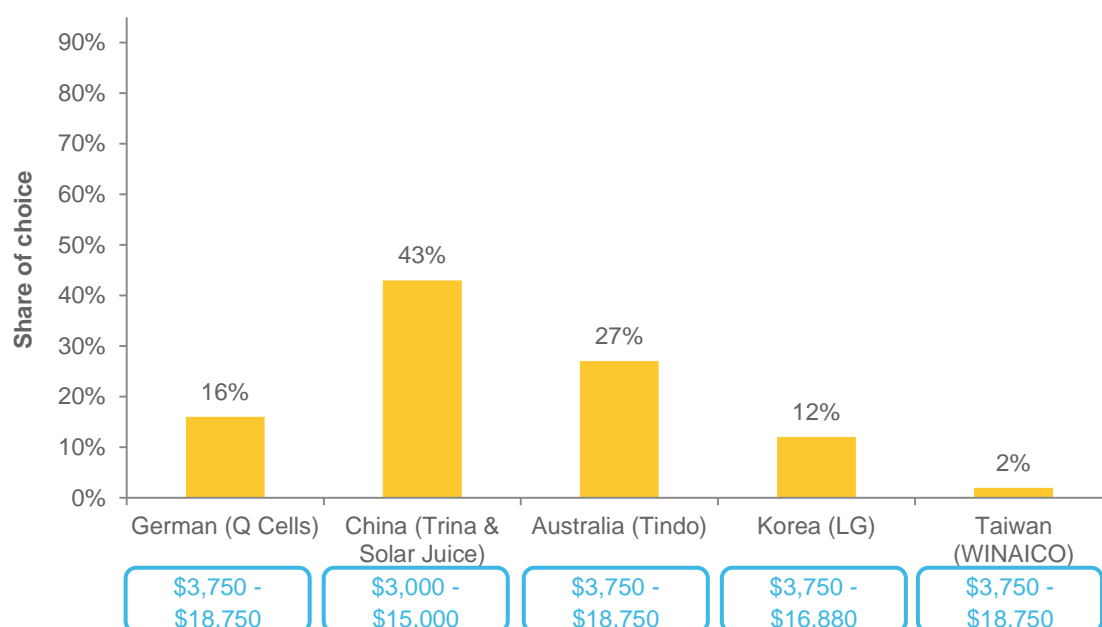
Base: all respondents (n=512)

Scenario 5

In this final simulation we can see the conditions necessary for Chinese panels to command a greater share of choice than the Australian Tindo brand. While in reality this is already the case, this is largely due to other factors. These other factors could potentially include Tindo's timing of market entry, their marketing strategy and the price sensitivity of consumers. Therefore this simulation can reveal what specific attributes would help raise the profile of Chinese brands without such extraneous variables.

When Chinese panels offer a 25 year product warranty and hold the lowest price point, while the rest of the market offers only a 15 year warranty and the top price point, the Chinese panels would account for two fifths (43%) of share of choice. However despite these advantages to China Australian assembled panels would still hold over a quarter (27%) of the total share of choice.

Figure 19: Simulation 12 – Chinese panels with extra 10 years of product guarantee



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

Base: all respondents (n=512)

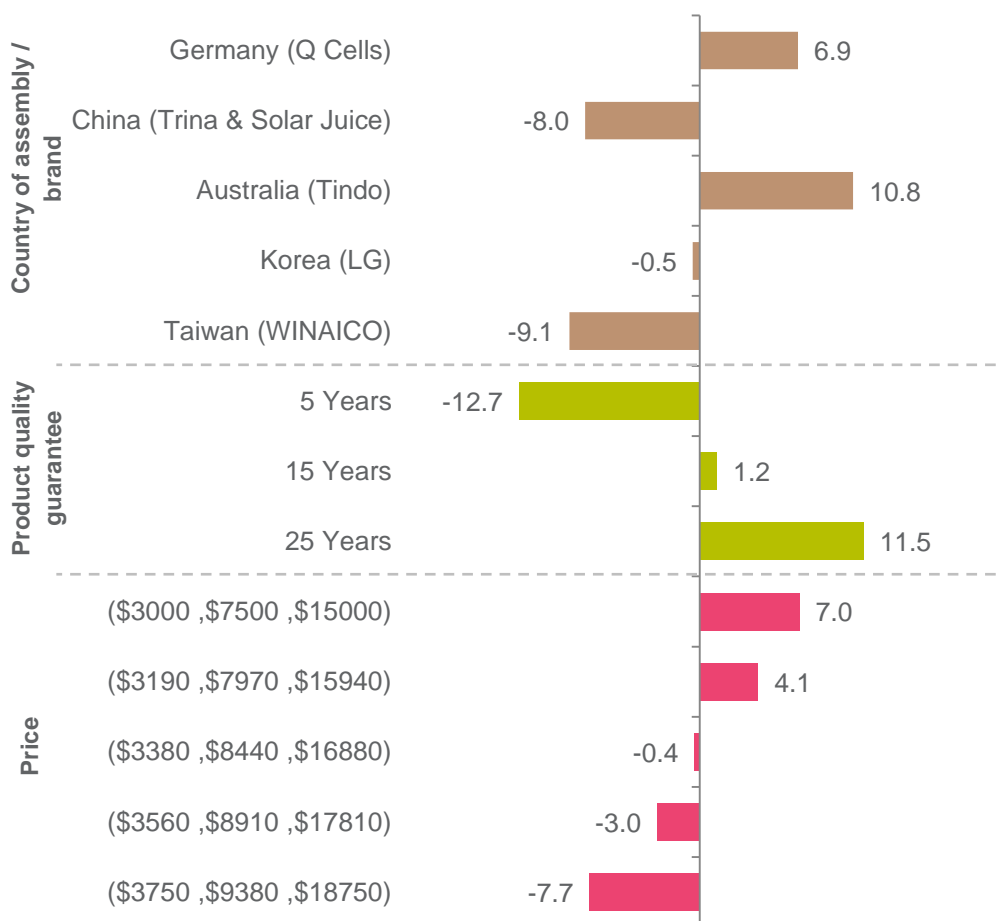
Utility of choice

Utility is the strength of influence of each individual attribute, therefore the greater the utility the greater the strength of an attribute in the decision. This allows us to see which attributes will have the greatest impact on the choices made by those purchasing PV solar panels, while simultaneously being able to compare the impact certain attributes have on the purchase decision, both within and between elements (brand, guarantee, price, etc.).

Within the brand and country of assembly, Australia (Tindo) had the highest utility (10.8), whereas Chinese and Taiwanese had the lowest utility –8.0 and -9.1 respectively. Germany was next after Australia (6.9) followed by Korea (-0.5).

This indicates that if a consumer were presented with a complete choice, that the presence of the Australian assembled Tindo branded PV panel would be particularly influential in this choice. However, we also find that the lower priced PV solar panels also have a high utility, and therefore the role of price is worthy of further exploration.

Figure 20: Overall importance of attributes



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)

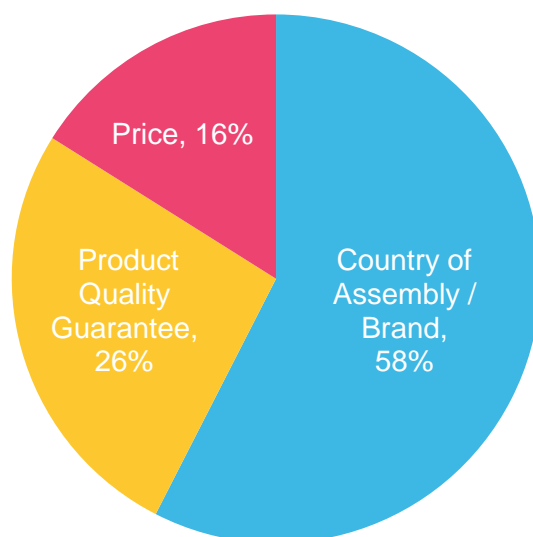
Base: all respondents (n=512)

Overall share of choice

In the real world the process of PV solar consumer choice is complex with many variables and varying levels of involvement for consumers. A choice experiment was conducted in order to control for a number of these different variables to ascertain an accurate measure of the importance of country of assembly, product quality and price in the decision making process.

When faced with the choice of a variety of PV solar panel packages we find that country of panel assembly combined with brand makes up the greatest share of choice, contributing to nearly three fifths (58%) of the choice. Product quality guarantee accounts for a quarter (26%), with price making up a sixth (16%) of the choice.

Figure 21: Overall importance of attributes



QC2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home? (SR)
Base: all respondents (n=512)

The role of price

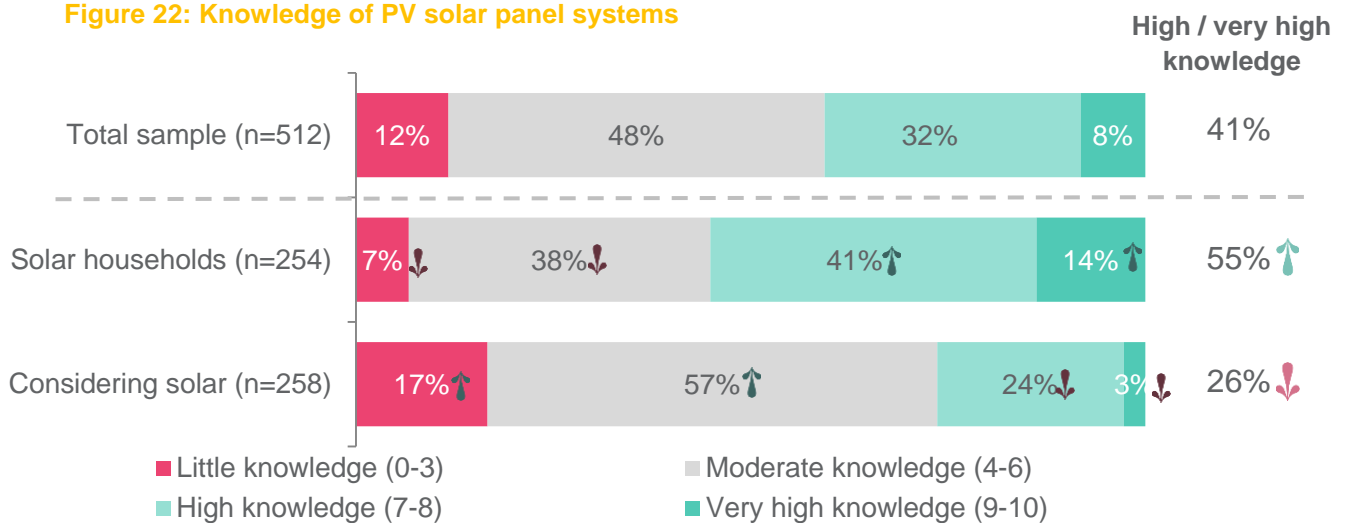
Therefore our choice modelling analysis has shown that quality plays the most significant part of the choice exercise. When presented with a perfect choice, consumers are more likely to associate Australian and German PV panels with quality. However, when Chinese panels come with a higher quality guarantee their share of choice increases, and at a significantly lower price point, they would attract the highest share of choice, as seen in Simulation 12. With these quality guarantees they will hold the largest share of choice regardless of price, especially as the competition is not going to be cheaper.

4.2. Awareness and knowledge

The majority of Australians who have PV solar, or have considered it, feel informed about the product; with two fifths (41%) claiming to have high levels of knowledge. This increases to over one half (55%) when considering those who already use PV solar panels.

Significantly less knowledge is held by those considering PV solar panels, with only one quarter (26%) believing they have a high knowledge of PV solar panels. This suggests that a large portion will need more PV solar panel information as they come closer to making their purchasing decision.

Figure 22: Knowledge of PV solar panel systems



Q1. On a scale of 0 to 10 how much would you say you know about rooftop solar electricity systems? (SR)

Base: all respondents (n=512)

Significance testing at 95% confidence between users and those considering – significantly higher ↑ and significantly lower ↓

Financial return

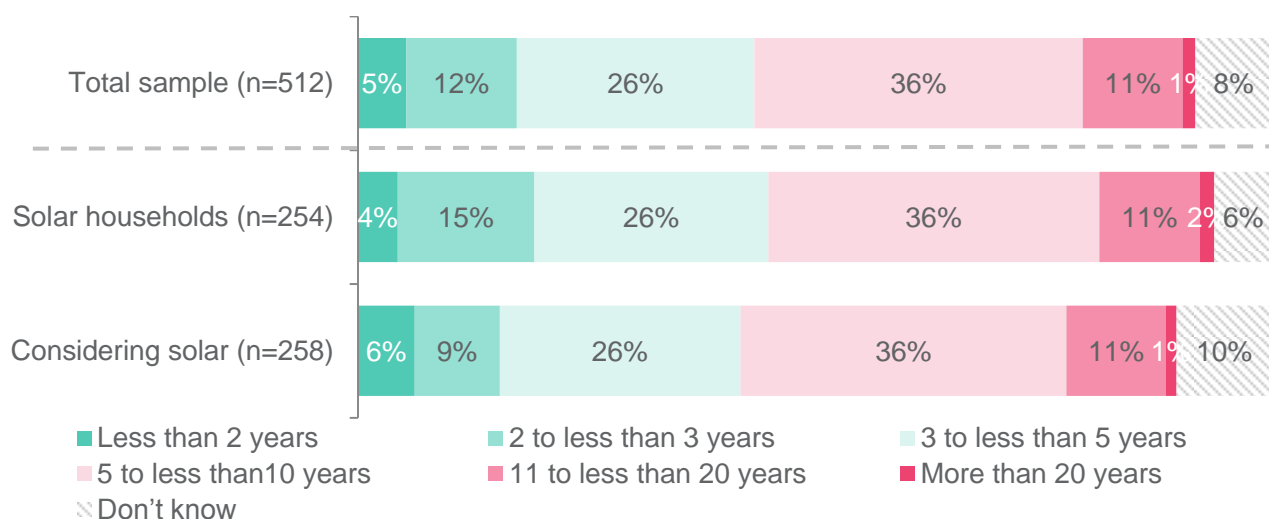
Regardless of whether they are users of PV solar panels or not the Australians surveyed have similar expectations regarding the time it would take to make back the costs of PV solar panels.

Nearly half (48%) believe it will take at least 5 years for a PV solar panels system to pay for itself, while a smaller proportion (43%) believe a system could pay for itself in less than five years. Within this second group nearly one fifth (17%) believe their investment will pay for itself in less than 3 years.

Nearly one in ten Australians (8%) do not know how long it would take for a system to pay for itself.

These findings do not differ between those who have PV solar and those considering it.

Figure 23: Expected financial return of solar electricity systems



Q2. How long would you expect it to take for a solar electricity system to pay for itself? (SR)
Base: all respondents (n=512)

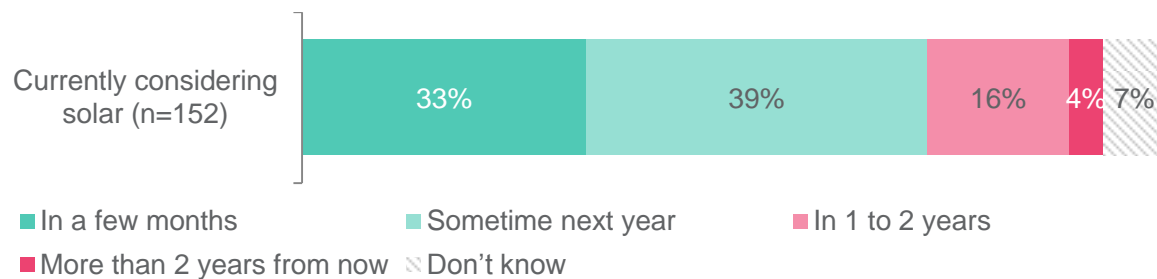
4.3. Non solar households

Expected length of decision making process

Two fifths of Australians who are considering solar (39%) will make their decision to install PV solar panels within the next year, while a slightly smaller proportion (33%) will decide in the next few months. Suggesting the majority of those considering PV solar believe they will make a decision within 12 months.

One in six (16%) will decide in the next one to two years and a very small proportion (4%) will decide in more than 2 years.

Figure 24: Predicted time needed to make a decision on PV solar panels



Q3. When do you think you will make the final decision about installing a rooftop solar electricity system? (SR)
Base: all respondents currently considering solar (n=152)

4.4. Existing solar users

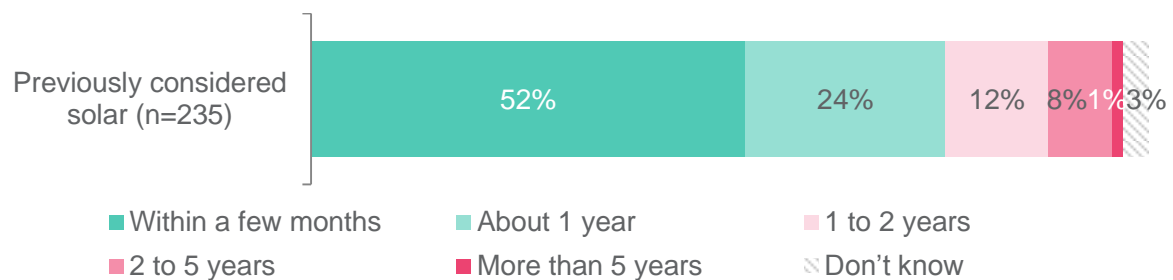
Length of decision making process

Just over half of Australians (52%) who installed PV solar panels in their own homes made the final decision regarding installation within a few months of first considering.

A quarter (24%) took about one year to make their decision, one in eight decided within one to two years (12%) and one in ten (9%) spent more than two years deciding.

Comparing these results between groups it is suggested that the decision process may be quicker than expected. Given that a third (33%) of those currently considering installing PV panels expect their decision to be made with a few months, whereas over half (52%) of those with PV solar made their decision within a few months. However the majority of those considering and those who already have installed panels believe the decision takes up to a year.

Figure 25: Time taken to make a decision on PV solar panels



Q4. How long did it take to make the final decision to install a rooftop solar electricity system from the time it was first considered? (SR)

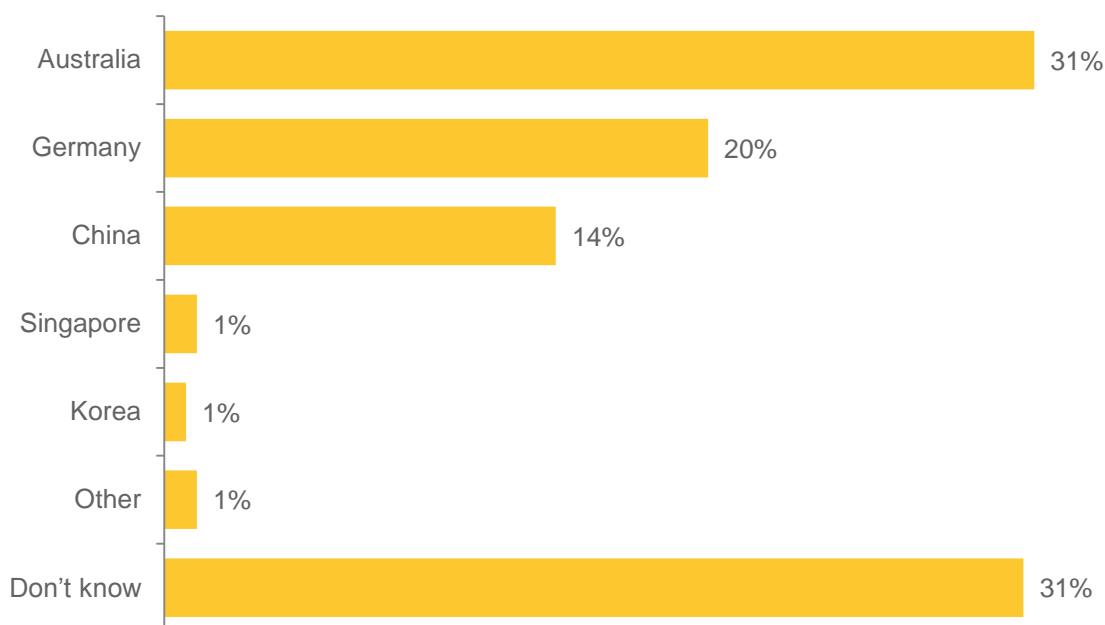
Base: all respondents who installed solar (n=235), excludes those who purchased homes with existing panels.

Three in ten Australians (31%) do not know the country of manufacture for their PV panels. Suggesting that consumers purchasing PV panels have a range of issues to consider.

For those that do know where their panels come from, three in ten Australians (31%) believe that they purchased PV panels made by Australian manufacturers. A fifth (20%) purchased German made panels and one in seven (14%) selected panels made in China. A very small proportion have panels made in either Singapore (1%), Korea (1%) or from other countries (1%).

As Australian assembled panels do not make up three in ten of all panels purchased it is clear that there is some confusion. It could be that households assume that their panels are Australian assembled when they are not or perhaps that it is not made clear during the sales process. Regardless, given the importance of country of origin and brand in the purchase decision it is clear there is a lack of awareness among consumers on the true origin of their panels.

Figure 26: Solar panel country of origin



Q4. In which country were your solar panels made? (SR)

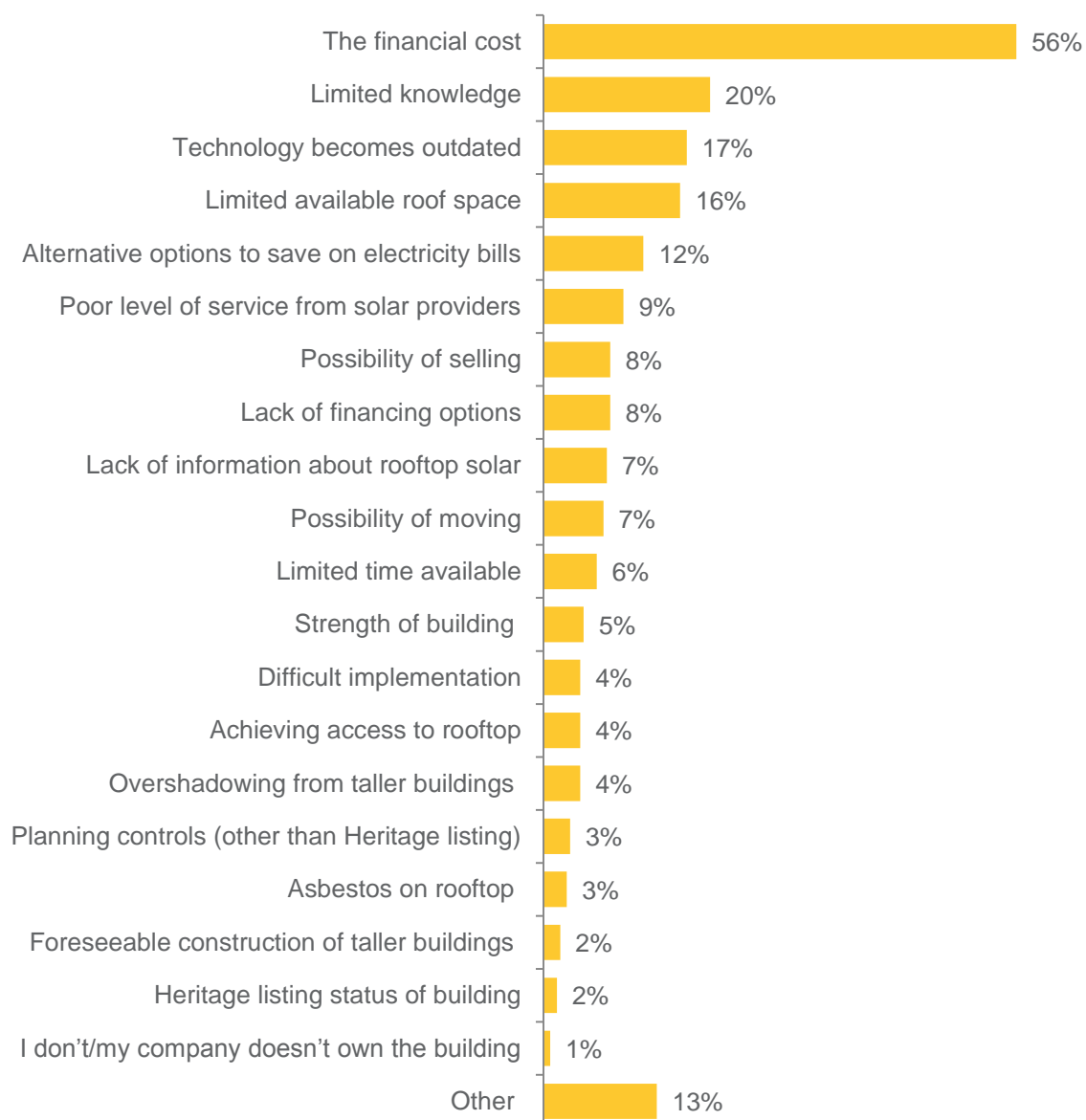
Base: all respondents who have solar (n=254)

Note: countries with <1% not charted

When asked to consider what issues were of consideration when choosing PV panels, the majority of households with solar (56%) state the financial cost. Despite this being the stand out issue, a number of other factors impact on the decision. Given that a fifth (20%) had to consider or overcome having limited knowledge on the topic it is likely that the role of salespersons is influential in the final decision.

A smaller proportion (17%) were concerned about the technology improving in the near future. One in six (16%) considered limited roof space and one in eight (12%) weighed up using alternative options to reduce the cost of the energy bills.

Figure 27: Issues considered when installing solar panels



Q6. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar electricity system?

Please select all that apply. (MR)

Base: all respondents who have solar (n=254)

4.5. Other choice factors

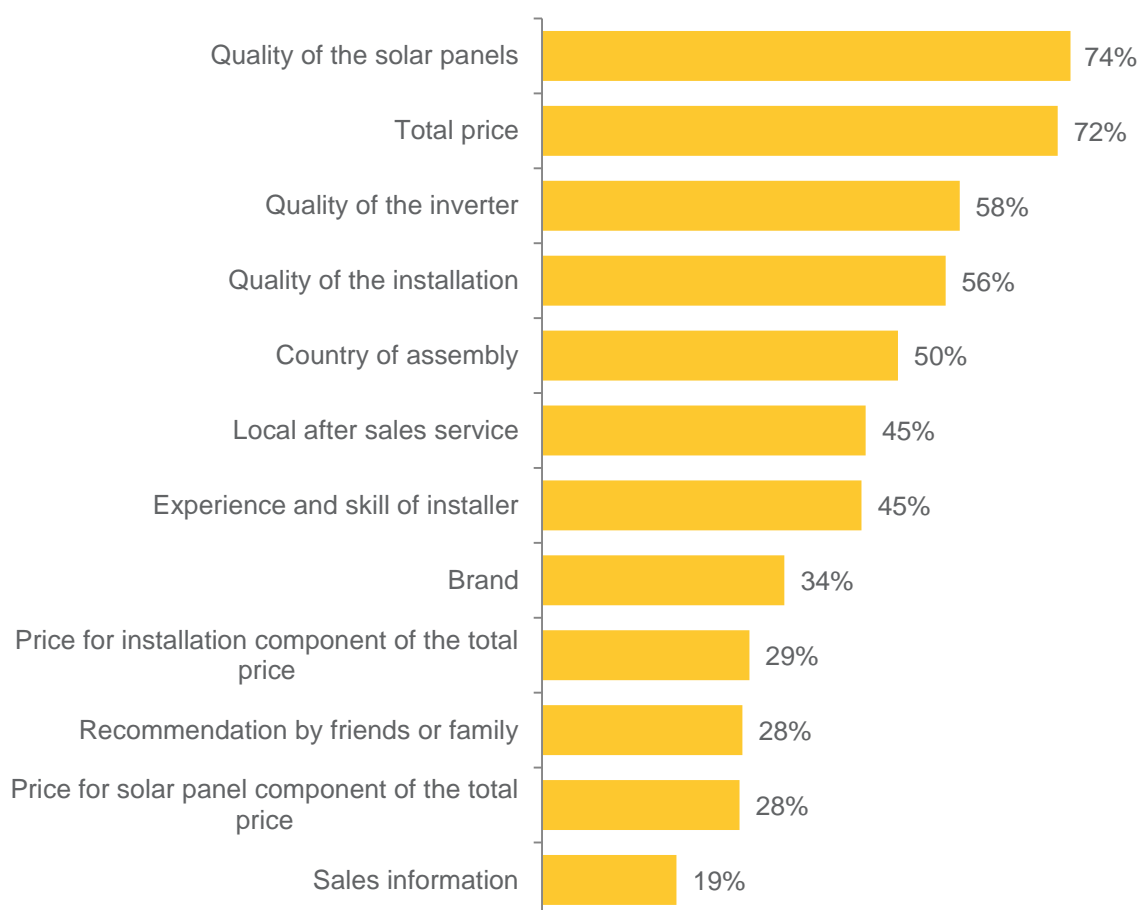
Influences on decision making

When asked to consider what features would influence their choice of solar panels, the majority consider the quality of the panel (74%) and the total price (72%) to be of influence.

Nearly three fifths consider the quality of the inverter (58%) and a smaller proportion consider the quality of installation (56%) to be features influencing their choice of panel.

Half (50%) also consider the country of assembly to be important while more than two fifths consider local after sales service (45%) and the experience and skills of the installer (45%) to be important.

Figure 28: Features influencing choice of panels



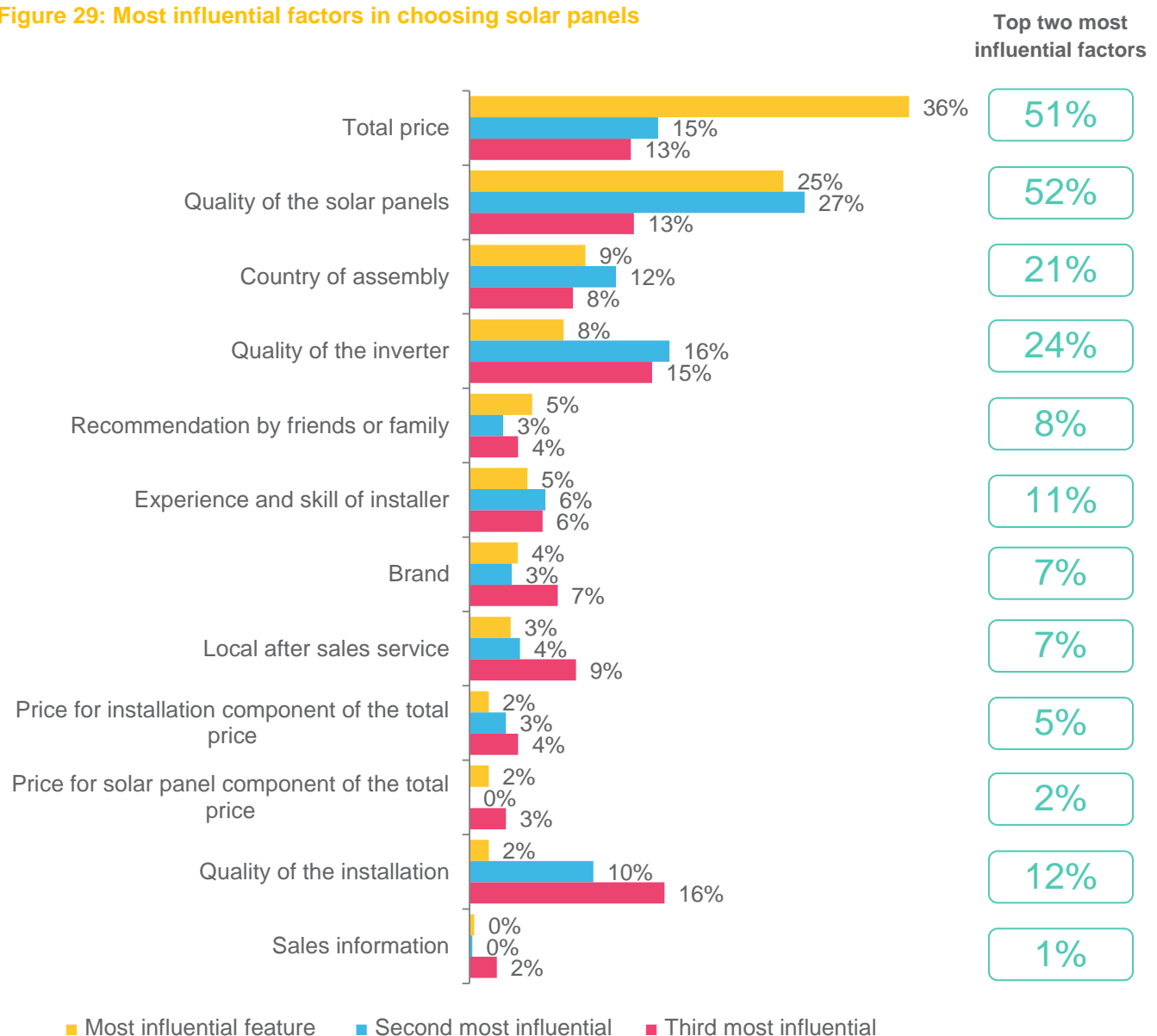
QC3. What would you consider to be the features that influence your choice of solar panels to generate electricity for your home? (MR)

Base: all respondents (n=512)

When asked to consider what are the most influential features when choosing solar panels, over half of Australians (51%) consider the total price to be among the most influential. While a smaller proportion (21%) consider the country of assembly to be the most important factor. This finding confirms the conclusion that the decision is a complex mix of issues. Although this tells us that price is important, the choice modelling tells us that when combined with issues of quality smaller differences in price have little influence.

A quarter (25%) considers the quality of the panels to be influential. However when considering the top two most influential features, half of Australians consider price (51%) of almost equal importance to quality solar panels (51%).

Figure 29: Most influential factors in choosing solar panels



QC4. Please rank the features that would influence your choice from 1 to 3, with 1 being the most influential, 2 the second most influential, and 3 the third most influential. (MR)

Base: all respondents (n=512), all respondents who made two choices (n=439), all respondents who made one choice (n=406)

Note: Asterisk indicates low base size (*)

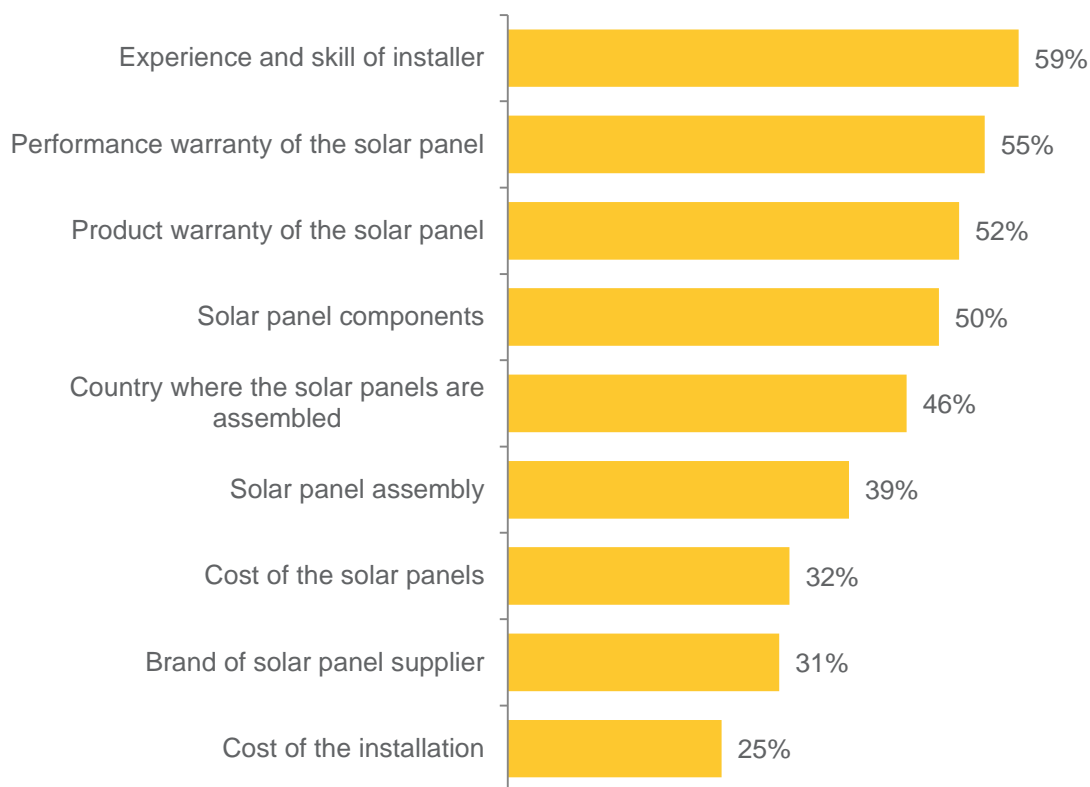
Influences on achieving high quality results

When asking Australians to consider which elements will impact on achieving high quality results, we find another issue to be important; the experience and skill of the installer. This aspect was not touched on in earlier questions and its presence here highlights that it is of importance.

Three fifths consider experience and quality of the installer (59%) to contribute to a high quality result. While a smaller proportion (55%) believe the performance warranty of their panel to influence high quality results.

Approximately half also consider the product warranty of the PV panels (52%) and the components of the panels (50%) to be indicators of a high quality final result. Further, over two fifths believe country of assembly (46%) to contribute to a quality result.

Figure 30: Elements contributing to a high quality result



QC5. Which of the following elements of the solar panel installation process would you consider contribute to a high quality final result? (MR)

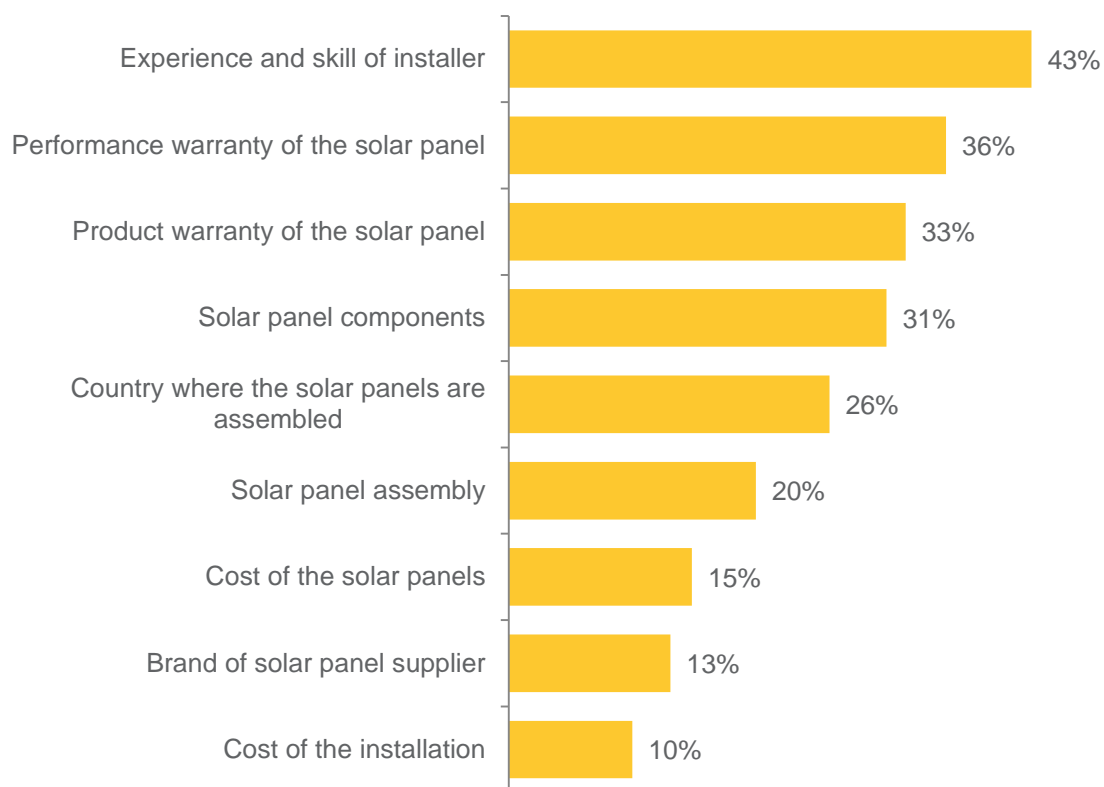
Base: all respondents (n=512)

When limited to choosing the three most important elements that contribute to a high quality final result, two fifths state the experience and skill of the installer (43%), reaffirming that the installer is a key indicator of final quality.

Further over one third state the performance warranty (36%) as a key indicator, and a smaller proportion note the product warranty (33%) and the solar panel components (31%). This suggests that these elements of the panel as a product are also key to achieving high quality results.

A quarter of Australians (26%) select the country of assembly and a fifth (20%) considers the solar panel assembly as contributing to a high quality result. Less than one in six (15%) believe the cost of the solar panels to be an indicator of quality, suggesting that for the majority a high price may not necessarily be an indicator of quality solar panels.

Figure 31: Elements most contributing to a high quality result



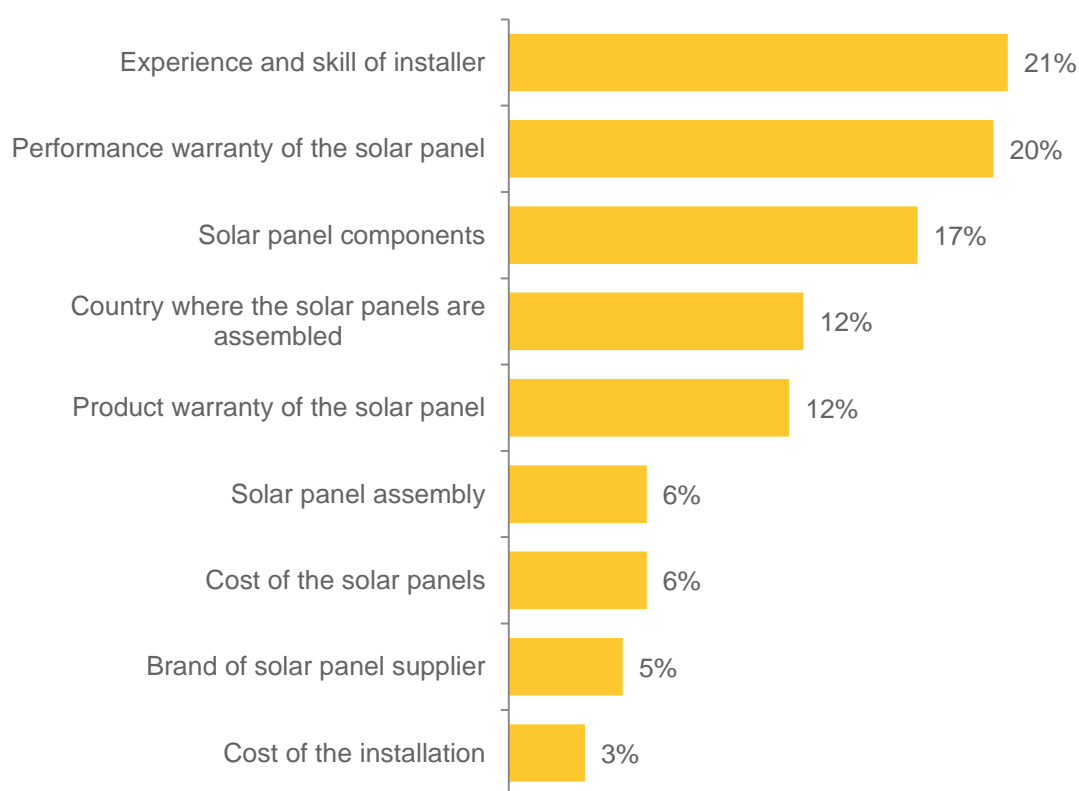
QC6. And which of the following elements of the solar panel installation process would you consider most contributes to a high quality final result? (MR UP TO THREE)

Base: all respondents (n=512)

When asked to choose the single most important contributing element, the experience and skill of the installer (21%) and the performance warranty of the panel (20%), remain at the top of the list for one fifth of all Australians. Given the significant proportion of Australians nominating these elements, it is suggested that the meaning of quality is made up of multiple elements and not just connected to the country of assembly or manufacture. This includes the human element of installing the panels, which was previously not included.

In terms of physical components in PV panels, approximately one in six (17%) consider the solar panel components to be the most important element of quality, while one in eight attribute the country of assembly (12%) and the product warranty to be the most important indicators of quality (12%).

Figure 32: Element most important in contributing to a high quality result



QC7. And if you had to choose the most important, which of the following elements of the solar panel installation process would you consider contribute to a high quality final result? (SR)

Base: all respondents (n=512)

5. Conclusions

PV solar purchasing is a complicated choice, therefore many variables must be considered when analysing the purchase decision. The choice exercise suggests that country of panel assembly and the associated brand to be the most important attribute involved in the decision making process, contributing to nearly three fifths (58%) of the choice. While product quality guarantee accounted for a quarter (26%) of the choice, and price making up just a sixth (16%).

When price is varied across a range of analytical scenarios we find movement in the percentage increase and decrease of the share of Choice for Chinese assembled panels. However, the decrease in choice moved from Chinese assembled panels to Taiwanese or Korean (most often), and as is seen in the cross price elasticity analysis Australian assembled panels see little benefit from movement in the Chinese price.

When asking Australians to consider what they think influences their choice three quarters nominate the quality of the Panels (74%), and Price (72%) as influencing the final decision, with the quality of the inverter (58%) and quality of installation (56%) also influential features. Further the role of the installer was also considered by over two fifths (43%) to be one of the key indicators of a high quality result.

When choosing from a list of simple attributes, price comes up as the most influential feature of the decision for a third of consumers (36%); this is further enforced with a majority of those who installed panels (56%) considering the financial cost to be a significant barrier to acquiring PV panels. However deeper analysis indicates that there is a lack of knowledge on where PV panels are assembled suggesting consumers may struggle to collate all the information they require.

Despite price being identified as a key feature, the choice exercise analysis explains that a certain level of quality needs to be obtained before price can become relevant. If quality was the same across the choice it would require Chinese panels to be more expensive than their Australian competitors before we see a specific impact on the appeal of Chinese panels - but importantly it is German and Korean assembled panels that would benefit more greatly than Australian – albeit to a small degree.

6. Sample profile

Table 2: Gender

	Total (n=512)
Male	44%
Female	56%
Other	-

S1. Please indicate your gender: (SR)
Base: all respondents (n=512)

Table 3: Age

	Total (n=512)
15-24 years	15%
25-34 years	17%
35-44 years	17%
45-54 years	18%
55-64 years	18%
65+ years	16%

S2. Which one of the following age groups do you fall into? (SR)
Base: all respondents (n=512)

Table 4: Location

	Total (n=512)
New South Wales	32%
Victoria	24%
Queensland	21%
South Australia	8%
Western Australia	10%
Northern Territory	1%
Tasmania	2%
Australian Capital Territory	2%

S3. Please enter your postcode in the space below? (OE)

Base: all respondents (n=512).

Table 5: Dwelling type

	Total (n=512)
Separate house	89%
Semi-detached house	11%

S4. Which of the following best describes the type of dwelling or place where you currently live? (SR)

Base: all respondents (n=512).

Table 6: Home ownership

	Total (n=512)
I live at home with family	34%
I own/jointly own my home	53%
I own the home I occupy and have an investment property (not an apartment)	11%
I rent the home I occupy and have an investment property (not an apartment)	2%

S5. Which of the following best describes your situation? (OE)

Base: all respondents (n=512).

Appendix A: quantitative questionnaire

1. Schedule/Timing

Final Questionnaire sent to Field Project Manager: 8-07-16
Pilot Commences (mail out): 13-07-16
Pilot Concludes (ready to download): 14-07-16
Fieldwork Commences (mail out): 14-07-16
Fieldwork Concludes (ready to download): 19-07-16

2. Sample Size

N= 500

3. Interview Length

10 minutes

4. Sampling

Qualifying Criteria:

- n=250 main/joint decision-makers who have PV solar panels in their home (10% of homes have PV panels in Australia)
- n=250 main/joint decision-makers who are also home owners and interested in PV solar

Sub-Quota Requirements:

- roughly Nat Rep by location – minimum numbers for analysis in each area.

Estimated Net Qualifying Rate:

- 20-30%

ONLINE QUESTIONNAIRE

SCREENING QUESTIONS

GENDER

ASK ALL, SR

S1 Please indicate your gender:

1. Male
2. Female
3. Other

AGE

ASK ALL, SR [UNDER 14YRS SCREEN OUT]

S2 Which one of the following age groups do you fall into?

1. 14 or under
2. 15-17
3. 18-19
4. 20-24
5. 25-29
6. 30-34
7. 35-39
8. 40-44
9. 45-49
10. 50-54
11. 55-59
12. 60-64
13. 65-69
14. 70+

TERMINATE IF CODE 1

LOCATION

ASK ALL, OE-NUM (0-9999)

S3. Please enter your postcode in the space below.

HIDDEN

hs3_CITY. LOCATION CLASSIFICATION

1. Sydney
2. NSW other than Sydney
3. Melbourne
4. Victoria other than Melbourne
5. Brisbane metropolitan area
6. Queensland other than Brisbane metropolitan area
7. Adelaide
8. South Australia other than Adelaide
9. Perth
10. Western Australia other than Perth
11. Darwin
12. Northern Territory other than Darwin
13. Hobart
14. Tasmania other than Hobart
15. Canberra
16. ACT outside Canberra

CHECK QUOTAS

hS3_STATE

1. NSW (CODE 1 OR 2)
2. VIC (CODE 3 OR 4)
3. QLD (CODE 5 OR 6)
4. SA (CODE 7 OR 8)
5. WA (CODE 9 OR 10)
6. TAS (CODE 13 OR 14)
7. NT (CODE 11 OR 12)
8. ACT (CODE 15 OR 16)

DWELTYP

ASK ALL, SR

S4 Which of the following best describes the type of dwelling or place where you currently live?

Please select one option.

1. Separate house
2. Semi-detached house/Terrace house/Townhouse/Villa
3. Flat or unit in a multi-storey apartment block
4. "Lifestyle" (e.g. Over 45s, Over 55s) accommodation
5. Residential aged care facility
6. Other. (please specify)
7. I have no permanent residence

TERMINATE IF CODE 3,4,5,6,OR 7

OWNERSHIP

ASK ALL, SR

S5. Which of the following best describes your situation?

1. I live at home with family
2. I rent the home I occupy (i.e. I don't own a home or investment property)
3. I own/jointly own my own home
4. I own the home I occupy AND have an investment property that is a house, town-house etc., i.e. not an apartment
5. I rent the home I occupy AND have an investment property that is a house, town-house etc., i.e. not an apartment
99. Refuse to answer

TERMINATE IF CODE IF 2 OR 99

DECISION

ASK ALL, SR

S6 Which of the following best describes your role in household decision-making? By decision-making we mean things such as renovations, improvements, maintenance etc. of this property? Please select one option.

1. I am the main decision-maker
2. I jointly share the decision-making with another household member
3. I seldom do any household decision-making
4. I never do any household decision-making

TERMINATE IF CODE 3 OR 4

PRESENCE OF SOLAR

ASK ALL, SR

S7. Does your residence have a rooftop solar electricity system installed?

1. Yes
2. No

CHECK QUOTAS

hS7

1. Have solar

CONSIDERATION OF SOLAR

ASK ALL CODE 2 AT S7, SR

S8. Are you currently considering, or have you previously considered, installing a rooftop solar electricity system on your home?

1. Yes, previously considered
2. Yes, currently considering
3. No

TERMINATE IF CODE 3

CHECK QUOTAS

hS7

2. Considering solar

IF UNSUCCESSFUL

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

MAIN BODY OF QUESTIONNAIRE

AWARENESS AND KNOWLEDGE

AWARENESS

ASK ALL, SR

Q1. On a scale of 0 to 10 how much would you say you know about rooftop solar electricity systems?

0. I don't know anything about rooftop solar electricity systems
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. I know a lot about rooftop solar electricity systems

FINANCIAL RETURN

ASK ALL, SR

Q2. How long would you expect it to take for a solar electricity system to pay for itself?

1. Less than 2 years
2. 2 to less than 3 years
3. 3 to less than 5 years
4. 5 to less than 10 years
5. 11 to less than 20 years
6. More than 20 years
97. Don't know

NON SOLAR USERS

FUTURE INSTALLATION

ASK IFS8=2, SR

Q3. When do you think you will make the final decision about installing a rooftop solar electricity system?

1. In a few months
2. Sometime next year
3. In 1 to 2 years
4. More than 2 years from now
97. Don't know

EXISTING SOLAR USERS

DECISION TIMILINESS

ASK IF 'HAVE SOLAR' QUOTA GROUP, SR

Q4. How long did it take to make the final decision to install a rooftop solar electricity system from the time it was first considered?

1. Within a few months
2. About 1 year
3. 1 to 2 years
4. 2 to 5 years
5. More than 5 years
99. The solar panels were installed before I purchased my home
97. I don't know

AU MADE

ASK IF 'HAVE SOLAR' QUOTA GROUP, SR

Q5. In which country were your solar panels made?

1. Australia
2. China
3. Taiwan
4. Germany
5. Singapore
6. Philippines
7. Korea
96. Other (specify)
97. Don't know

BARRIERS TO SOLAR

ASK IF 'HAVE SOLAR' QUOTA GROUP, MR

RANDOMISE CODES

Q6. Which, if any, of the following were issues you had to consider or overcome to install a rooftop solar electricity system? Please select all that apply.

1. My limited knowledge about rooftop solar electricity systems
2. Limited time available
3. The implementation was difficult
4. Limited available roof space
5. Asbestos on rooftop
6. Achieving access to rooftop
7. Strength of building
8. I don't/my company doesn't own the building
9. The possibility of moving to a different building
10. The possibility of selling the property/building
11. The financial cost
12. Lack of financing options
13. Overshadowing from taller buildings
14. Foreseeable construction of taller buildings
15. Availability of alternative options to save on electricity bill
16. Technology will improve significantly in the near future
17. Poor level of service from solar providers
18. Lack of information about rooftop solar
19. Heritage listing status of building
20. Planning controls (other than Heritage listing)
96. Other

CHOICE EXERCISE

We're about to show you some options to choose between. Before we do, please answer the following question.

USAGE

ASK ALL, SR

C1. How would you describe your electricity usage at your home?

1. Lower than average (**HIDDEN ALLOCATE TO 2KW CHOICES**)
2. Average (**HIDDEN ALLOCATE TO 5KW CHOICES**)
3. Higher than average (**HIDDEN ALLOCATE TO 10KW CHOICES**)

The series of options we are about to show you, may seem similar, but each choice will be different, please take your time and read each carefully. You will make 9 choices between 6 alternatives.

C2. In the boxes below, please indicate which solar package you would choose if you were to purchase solar panels to generate electricity for your home?

START SCERNARIO CHOICES

Information for choices

	(1-3 person home)	(2-4 Person home)	(3-4+ person home)
Size	2KW	5KW	10KW
Panels	8 x 250 Watt panels	20 x 250 Watt panels	40 x 250 Watt panels
Product Quality Guarantee	5, 15, 25 yrs	5, 15, 25 yrs	5, 15, 25 yrs
Product Warranty	10 yrs	10 yrs	10 yrs
Inverter	SMA SunnyBoy	SMA SunnyBoy	SMA SunnyBoy
Installer	Australian based installer	Australian based installer	Australian based installer

Price point 1	\$3,000	\$7,500	\$15,000
Price point 2	\$3,190	\$7,970	\$15,940
Price point 3	\$3,380	\$8,440	\$16,880
Price point 4	\$3,560	\$8,910	\$17,810
Price point 5	\$3,750	\$9,375	\$18,750

Brand	Assembled in
Q Cells	Germany
Trina	China
Tindo	Australia
LG Electronics	Korea
Solar Juice	China
WINAICO	Taiwan

FINAL CHOICE

ASK ALL, MR

RANDOMISE CODES, ANCHORING 1,3,4 & 5,6,7 TOGETHER

C3 What would you consider to be the features that influence your choice of solar panels to generate electricity for your home?

1. Total price
2. Experience and skill of installer
3. Price for installation component of the total price
4. Price for solar panel component of the total price
5. Quality of the solar panels
6. Quality of the installation
7. Quality of the inverter
8. Brand
9. Country of assembly
10. Sales information
11. Recommendation by friends or family
12. Local after sales service

FINAL CHOICE RANK

ASK ALL, MR, SHOW CODES SELECTED AT C3

AUTOCODE IF C3<3 RESPONSES

C4. Please rank the features that would influence your choice from 1 to 3, with 1 being the most influential, 2 the second most influential, and 3 the third most influential.

1. Total price
2. Experience and skill of installer
3. Price for installation component of the total price
4. Price for solar panel component of the total price
5. Quality of the solar panels
6. Quality of the installation
7. Quality of the inverter
8. Brand
9. Country of assembly
10. Sales information
11. Recommendation by friends or family
12. Local after sales service

QUALITY TOTAL

ASK ALL, MR

C5. Which of the following elements of the solar panel installation process would you consider contribute to a high quality final result?

1. Experience and skill of installer
2. Solar panel assembly
3. Solar panel components
4. Performance warranty of the solar panel
5. Product warranty of the solar panel
6. Country where the solar panels are assembled
7. Brand of solar panel supplier
8. Cost of the solar panels
9. Cost of the installation

QUALITY UP TO 3

ASK IF SELECTED MORE THAN 3 CODES AT C5, MR UP TO THREE

SHOW ALL CODES SELECTED AT C5

C6. And which of the following elements of the solar panel installation process would you most consider contributes to a high quality final result?

Please select the three most applicable

1. Experience and skill of installer
2. Solar panel assembly
3. Solar panel components
4. Performance warranty of the solar panel
5. Product warranty of the solar panel
6. Country where the solar panels are assembled
7. Brand of solar panel supplier
8. Cost of the solar panels
9. Cost of the installation

IF CHOSE ≤3 CODES AT C5, AUTOCODE RESPONSES FROM C5 TO C6

QUALITY MAIN

ASK IF SELECTED 2 OR MORE CODES AT C5, SR

IF SELECTED >3 CODES AT C5 ONLY SHOW CODES SELECTED AT C6,

IF SELECTED ≤3 BUT > 1 AT C5 ONLY SHOW CODES SELECTED AT C5

C7. And if you had to choose the most important, which of the following elements of the solar panel installation process would you consider contribute to a high quality final result?

1. Experience and skill of installer
2. Solar panel assembly
3. Solar panel components
4. Performance warranty of the solar panel
5. Product warranty of the solar panel
6. Country where the solar panels are assembled
7. Brand of solar panel supplier
8. Cost of the solar panels
9. Cost of the installation

IF CHOSE 1 CODE AT C5, AUTOCODE RESPONSES FROM C5 TO C7