



**Australian Government**  
**Anti-Dumping Commission**

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**CUSTOMS ACT 1901 - PART XVB**

**TERMINATION REPORT NO. 239**

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

**EXPORTED FROM**

**THE PEOPLE'S REPUBLIC OF CHINA**

**6 October 2015**

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

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**ABBREVIATIONS**

ABF	The Australian Border Force
ADA	Anti-Dumping Agreement
\$ or AUD	Australian dollars
AC	alternating current
ACBPS	Australian Customs and Border Protection Service
ADN	Anti-Dumping Notice
CCCME	Chinese Chamber of Commerce for Import and Export of Machinery and Electronic Products
CFR	cost and freight
China	the People's Republic of China
CIF	cost, insurance and freight
CON 239	Consideration Report number 239
CTM	cost to make
CTMS	cost to make & sell
DC	direct current
EN	ET Solar Energy Limited
ET Solar	Collectively: <ul style="list-style-type: none"> <li>• ET Solar Energy Limited;</li> <li>• ET Solar Industry Limited; and</li> <li>• ET Energy Co. Limited</li> </ul>
ET Solar Australia	ET Solar Australia Pty Ltd
FIT	feed-in-tariff
FOB	free on board
GAAP	generally accepted accounting principles
GOC	Government of China
INV	Investigation
investigation period	1 July 2012 to 31 December 2013
NIP	non-injurious price
NY	ET Energy Co. Limited
OCOT	ordinary course of trade
PAD	Preliminary Affirmative Determination
PV modules or panels	crystalline photovoltaic modules or panels
R&D	research and development
Renesola Australia	ReneSola Australia Pty Ltd
Renesola Jiangsu	ReneSola Jiangsu Limited
Renesola Ltd	Collectively: <ul style="list-style-type: none"> <li>• ReneSola Australia Pty Ltd;</li> </ul>

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	<ul style="list-style-type: none"> <li>• ReneSola Jiangsu Limited; and</li> <li>• ReneSola Zhejiang Limited</li> </ul>
ReneSola Zhejiang	ReneSola Zhejiang Limited
RMB	Chinese renminbi
SEF	Statement of Essential Facts
SG&A	selling, general and administrative expenses
Suntech	Wuxi Suntech Power Co. Ltd
Suntech Australia	Suntech Power Australia Pty Ltd
TAU	Trina Solar (Australia) Pty Ltd
TCZ	Changzhou Trina Solar Energy Co. Ltd
TED	Trina Solar Energy Development PTE Ltd
the Act	<i>Customs Act 1901</i>
the applicant or Tindo	Tindo Manufacturing Pty Limited
the Commission	the Anti-Dumping Commission
the Commissioner	the Commissioner of the Anti-Dumping Commission
the Dumping Duty Act	the <i>Customs Tariff (Anti-Dumping) Act 1975</i>
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
the Parliamentary Secretary	the Parliamentary Secretary to the Minister for Industry, Innovation and Science
Trina Solar	Collectively: <ul style="list-style-type: none"> <li>• Changzhou Trina Solar Energy Co. Ltd;</li> <li>• Trina Solar (Changzhou) Science and Technology Co. Ltd;</li> <li>• Trina Solar Energy Development PTE Ltd;</li> <li>• Trina Solar Energy (Shanghai) Co. Ltd; and</li> <li>• Trina Solar (Australia) Pty Ltd</li> </ul>
TSH	Trina Solar Energy (Shanghai) Co. Ltd
TST	Trina Solar (Changzhou) Science and Technology Co. Ltd
TT	ET Solar Industry Limited
USP	unsuppressed selling price
W	wattage (or watts)

## 1 SUMMARY AND FINDINGS

This Termination Report number 239 (TER 239) relates to the Anti-Dumping Commission's (the Commission's) investigation into allegations by Tindo Manufacturing Pty Ltd (Tindo) that certain dumped crystalline silicon photovoltaic modules or panels (PV modules or panels, or the goods) exported to Australia from the People's Republic of China (China) have caused material injury to the Australian industry producing like goods.

This report sets out the facts on which the Commissioner of the Anti-Dumping Commission (the Commissioner) based his decision to terminate the investigation.

### 1.1 Findings

The Commissioner has found that:

- PV modules or panels exported to Australia from China during the period 1 July 2012 to 31 December 2013 (the investigation period) were exported at dumped prices; but
- the injury to the Australian industry or the hindrance to the establishment of an Australian industry that has been, or may be, caused by those exports is negligible.

As a result of these findings, the Commissioner is obliged to terminate the investigation as it relates to China in accordance with s. 269TDA(13) of the *Customs Act 1901* (the Act).<sup>1</sup>

A notice regarding the termination was published in *The Australian* newspaper on 6 October 2015. Anti-Dumping Notice (ADN) 2015/118 also advises of the termination.

### 1.2 Application of law to facts

#### 1.2.1 Authority to make decision

Division 2 of Part XVB of the Act sets out, among other matters, the procedures to be followed and the matters to be considered by the Commissioner in conducting investigations in relation to the goods covered by an application.

#### 1.2.2 Application

On 4 February 2014, Tindo lodged an application requesting that the Parliamentary Secretary to the Minister for Industry, Innovation and Science <sup>2</sup> (the Parliamentary Secretary) publish a dumping duty notice in respect of certain PV modules or panels exported to Australia from China.

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

<sup>2</sup> At the time the application was lodged, the then Minister for Industry and Science had delegated responsibility with respect to anti-dumping matters to the then Parliamentary Secretary to the Minister for Industry and Science. After 13 September 2015, the newly appointed Minister for Industry, Innovation and Science has delegated responsibility with respect to anti-dumping matters to the Parliamentary Secretary for Science and accordingly, the Parliamentary Secretary is the relevant decision maker for this investigation.

The Commissioner was satisfied that the application was made in the prescribed manner by a person entitled to make the application.<sup>3</sup>

### **1.2.3 Initiation of investigation**

After examining the application, the Commissioner was satisfied that:

- there is an Australian industry in respect of like goods<sup>4</sup>; and
- there appears to be reasonable grounds for the publication of a dumping duty notice in respect of goods the subject of the application, or for the publication of such notices upon the importation into Australia of such goods.<sup>5</sup>

The Commissioner decided not to reject the application, and notice of the initiation of this investigation was published on 14 May 2014.<sup>6</sup>

### **1.2.4 Statement of essential facts**

The Commissioner must, within 110 days after the initiation of an investigation, or such longer period as the Parliamentary Secretary allows under s.269ZHI of the Act, place on the public record a statement of essential facts (SEF) on which the Commissioner proposes to base his recommendation. In formulating the SEF the Commissioner must have regard to the application concerned, any submissions concerning publication of the notice that are received within 40 days after the date of initiation of the investigation and any other matters that he considers to be relevant.

The Commission published the SEF on 7 April 2015.

### **1.2.5 Submission following publication of the SEF**

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

- ET Solar Energy Limited; ET Solar Industry Limited and ET Energy Co. Limited (collectively referred to as ET Solar Ltd);
- 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 Solar);
- ReneSola Australia Pty Ltd; ReneSola Jiangsu Ltd and ReneSola Zhejiang Limited (collectively referred to as Renesola Ltd);
- Clean Energy Council of Australia (Clean Energy Council);
- Tindo Manufacturing Pty Ltd;
- the State Government of South Australia; and

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<sup>3</sup> s.269TB(1).

<sup>4</sup> s.269TC(1)(b).

<sup>5</sup> s.269TC(1)(c).

<sup>6</sup> s.269TC(4).

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- the China Chamber of Commerce of Import and Export of Machinery and Electronic Products (CCCME).

Public Record versions of all submissions received are available on the Commission's website ([www.adcommission.gov.au](http://www.adcommission.gov.au)).

### 1.3 Findings and conclusions

The Commissioner has made the following findings and conclusions based on the information gathered during the course of the investigation.

#### 1.3.1 The goods and like goods (Chapter 3 of this report)

Locally produced PV modules or panels are like to the goods the subject of the application.

The Commission has received a number of submissions from interested parties seeking an exemption from any anti-dumping measures in relation to certain goods under the *Customs Tariff (Anti-Dumping) Act 1975* (the Dumping Duty Act). As the investigation has been terminated, these submissions have not been assessed.

#### 1.3.2 Australian industry (Chapter 4 of this report)

There is an Australian industry producing like goods.

#### 1.3.3 Australian market (Chapter 5 of this report)

The Australian market for PV modules or panels is supplied by the Australian industry and imports, predominantly from China.

#### 1.3.4 Dumping investigation (Chapter 6 of this report)

PV modules or panels exported to Australia from China during the investigation period were dumped. The volume of dumped goods, and the dumping margins, were not negligible.

The Commission found the following dumping margins:

Exporter / Manufacturer	Product dumping margin
Changzhou Trina Solar Energy Co. Ltd; and Trina Solar (Changzhou) Science and Technology Co. Ltd	19.9%
ET Solar Energy Limited; ET Solar Industry Limited; and ET Energy Co. Limited	19.8%
Wuxi Suntech Power Co., Ltd	38.8%
ReneSola Jiangsu Limited and ReneSola Zhejiang Limited	16.1%
Residual Exporters	21.1%

NB: Wuxi Suntech Power Co. Ltd has exported a very small volume of PV modules or panels during the investigation period.



### **1.3.5 Economic condition of the industry (Chapter 7 of this report)**

During the investigation period, the Commission considers that the Australian industry's performance has been as follows:

- overall sales volume increased over the 18 month investigation period, except for the wholesale market;
- after a sharp decline in price between the first and second quarters of the investigation period, there were only slight falls in prices in other periods;
- prices had been suppressed throughout the investigation period. However, in the last two quarters unit costs had decreased sharply due to increased production volumes, reducing the gap between costs and revenue; and
- while there were losses overall, these had been smallest during the last quarter of the investigation period.

### **1.3.6 Causation (Chapter 8 of this report)**

The injury, to the Australian industry or the hindrance, to the Australian industry's establishment, caused by PV modules or panels exported to Australia at dumped prices is negligible. This finding was based on an assessment of all relevant factors; however the Commissioner attached significant weight to:

- the size of the dumping margins found relative to the difference in prices actually obtained for the dumped imports compared to the Australian industry;
- the availability of exports from China which, if not dumped, would have still been at prices significantly below Tindo's cost of production;
- the price sensitivity and preference of the downstream market for direct current (DC) rather than alternating current (AC) models; and
- Tindo's primary product offering being AC PV modules or panels, which were marketed as premium models and were priced significantly higher than the imported DC PV modules or panels during the investigation period.

## **1.4 Public record**

The public record contains the Public Record version of the initial application by the Australian industry and attachments, the Commissions' consideration report (CON 239), SEF 239, submissions made by interested parties, visit reports and other publically available documents and can be accessed using the following link [www.adcommission.gov.au](http://www.adcommission.gov.au).

This termination report should be read in conjunction with the documents on the public record.

## 2 BACKGROUND

### 2.1 Introduction

On 4 February 2014, Tindo lodged an application requesting the Parliamentary Secretary publish a dumping duty notice in respect of certain PV modules or panels exported to Australia from China.

The application alleged that PV modules or panels had been exported to Australia from China at prices lower than its normal value and that this dumping had caused material injury to the Australian industry producing PV modules or panels.

Following consideration of the application, the Commissioner decided not to reject the application and the Commissioner initiated an investigation on 14 May 2014. Public notification of the initiation of the investigation was made in *The Australian* newspaper on that day.

Anti-Dumping Notice (ADN) No. 2014/38 provides further details of the investigation and is available on the Commission's website at [www.adcommission.gov.au](http://www.adcommission.gov.au).

In respect of the investigation:

- the investigation period for the purpose of assessing dumping is 1 July 2012 to 31 December 2013; and
- the injury analysis period is from 1 January 2010 to 31 December 2013.

### 2.2 Previous investigations

There have been no previous investigations into alleged dumping in respect of PV modules or panels exported to Australia.

### 2.3 SEF and termination report

The Commissioner must, within 110 days after the initiation of an investigation, or such longer period as the Parliamentary Secretary allows<sup>7</sup>, place a statement of the essential facts on which the Commissioner proposes to base his recommendation.<sup>8</sup>

In formulating the SEF, the Commissioner must have regard to the application concerned, any submissions concerning publication of the notice that are received by the Commission within 40 days after the date of initiation of the investigation, and he may have regard to any other matters he considers relevant.<sup>9</sup>

The SEF was originally due to be placed on the public record on 1 September 2014. On 20 August 2014, the then Parliamentary Secretary granted a 65 day extension to the date by which the SEF must be placed on the Public Record. Two further extensions of 120 days and 30 days have since been granted by the then Parliamentary Secretary.

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<sup>7</sup> S. 269ZHI.

<sup>8</sup> S. 269TDAA(1).

<sup>9</sup> S. 269TDAA(2).

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The due date for the SEF to be placed on the public record was on or before 4 April 2015, which fell on a weekend, therefore the due date for placement of the SEF on the public record was the next working day, being 7 April 2015.

In the SEF, the Commissioner proposed to terminate the investigation in respect of PV modules or panels exported from China. Interested parties were invited to make submissions to the Commission in response to the SEF within 20 days of it being placed on the public record. Tindo and the State Government of South Australia requested and the Commissioner provided an extension of one week to respond to the SEF.

In response to the SEF, Tindo provided additional information asserting that various Government of China policies and measures have influenced the costs of raw materials and prices of PV modules or panels in the Chinese domestic market. Tindo claims that the domestic prices of PV modules or panels are not substantially the same as they would be in a competitive market (in other words, a particular market situation exists) and, therefore, the domestic selling prices are unsuitable for determining normal value.

The then Parliamentary Secretary provided two separate extensions of 60 days and 80 days' time to the due date for the final report to investigate Tindo's claim and the implications of a finding of a particular market situation. Unless the case is terminated earlier, a final report and recommendation to the Parliamentary Secretary is due by 6 October 2015.

### 2.4 Relevant legislation

Division 2 of Part XVB of the Act sets out, among other matters, the procedures to be followed and the matters to be considered by the Commissioner in conducting investigations in relation to the goods covered by an application for the publication of a dumping duty notice.

Section 269TDA(13) of the Act provides;

*If:*

- (a) application is made for a dumping duty notice; and*
- (b) in an investigation, for the purposes of the application, of an exporter to Australia of goods the subject of the application that have been, or may be, exported to Australia from a particular country of export, the Commissioner is satisfied that the injury, if any, to an Australian industry or an industry in a third country, or the hindrance, if any, to the establishment of an Australian industry, that has been, or may be, caused by that export is negligible;*

*the Commissioner must terminate the investigation so far as it relates to that Country.*

### 3 THE GOODS UNDER CONSIDERATION

#### 3.1 Findings

Locally produced PV modules or panels are like goods to the goods the subject of the application.

The Commission has received a number of submissions from interested parties in relation to the exclusion of certain goods from the investigation and any resulting anti-dumping measures due to them not being considered to be like goods as described below, or due to them being eligible for an exemption from those measures under the Dumping Duty Act.

As the Commissioner decided to terminate the investigation, the Commission did not consider these submissions.

#### 3.2 The goods

The goods the subject of the application (the goods), are:

*Certain crystalline silicon photovoltaic modules or panels, whether exported assembled or unassembled, and whether or not they have an inverter, capable of producing any power in terms of watt (PV modules or panels).*

Exclusions:

*The following product types are excluded:*

- *cells and wafers of the type used in PV modules or panels;*
- *solar chargers that consist of less than six cells, are portable and supply electricity to devices or charge batteries; and*
- *PV products that are permanently integrated into electrical goods, where the function of the electrical goods is other than power generation, and where these electrical goods consume the electricity generated by the integrated crystalline silicon photovoltaic cell(s).*

The application contains the following additional information in relation to the goods the subject to the application.

*A PV module is a packaged, connected assembly of solar PV cells. A solar PV cell is an electrical device that converts the energy of light directly into electricity by the photo-electric effect. It is a form of photoelectric cell which, when exposed to light, can generate and support an electric current without being attached to any external voltage source, but does require an external load for power consumption.*

*A solar panel (or array) is a set of PV modules electrically connected and mounted on a supporting structure. The PV module can be used as a component of a larger PV system to generate and supply electricity in commercial and residential applications.*

Mono-crystalline cells

- made from a single crystal of silicon and are more expensive to produce than poly-crystalline cells because mono-crystalline wafers are cylindrical in shape and when produced (wafers cut in octagonal shape), there is loss of material;
- require more rigid framework and specialised adhesives, with larger panels being more costly and more fragile<sup>10</sup>; and
- are considered to be more efficient than poly-crystalline cells.

Poly-crystalline cells

- also referred to as multi-crystalline cells;
- are effectively multiple silicon cells made from wafers which are rectangular in shape. The cells are square in shape therefore there is no loss of wafers and they are less expensive to produce than mono-crystalline cells; and
- have an efficiency of approximately two-thirds of the efficiency gained by mono-crystalline cells.<sup>8</sup>

PV modules or panels produced using mono-crystalline and poly-crystalline cells are the goods the subject of this application.

Alternating and direct current PV modules or panels

The two forms of power generated by the two different types of PV modules or panels are AC and DC. The differences between the AC and DC PV modules or panels are discussed below:

- AC modules or panels are ready to be plugged into the grid by the use of an on-board micro-inverter. The micro-inverters add to the price of the panel because each PV module requires a separate micro-inverter. AC PV modules or panels are therefore more expensive and are considered to be a 'premium' product to DC PV modules or panels;
- the in-built micro-inverters used in the AC PV modules makes each module independent in the panel<sup>11</sup> and feeds electricity directly into the electricity grid (as illustrated in Figure 2 below);
- each AC PV module can be removed from the panel and repaired individually in the event of any damages or any performance issues with a particular module and/or micro-inverter while other modules used in the panel continue to operate normally;

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<sup>10</sup> IBISWorld Industry Report OD4042 Solar Panel Installation in Australia [dated November 2014].

<sup>11</sup> A solar panel (or array) is a set of PV modules connected and mounted on a supporting structure.

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- AC PV modules or panels are considered to be more flexible with regards to installation on varied roof designs, intermittent shading areas etc;
- DC PV modules or panels are connected to a separate single inverter that converts the electricity generated to AC power;
- given that DC PV panels require a single inverter for multiple PV modules connected in 'series' in a panel, the price of DC PV modules or panels is lower than AC PV modules or panels;
- the disadvantage of DC PV modules or panels is that in the event of any damage to or any performance issues with a particular module and/or the inverter, the whole system needs to be disconnected leading to loss of electricity produced by the other functioning modules in the panel.

Figures 1 and 2 below demonstrate how the AC and DC modules fulfil the same end-use, with either an on-board or stand-alone inverter.

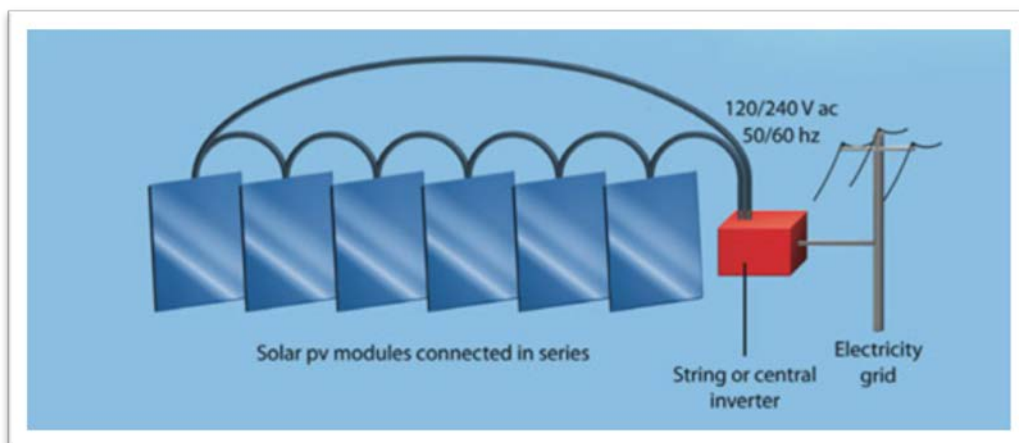


Figure 1 – DC PV modules

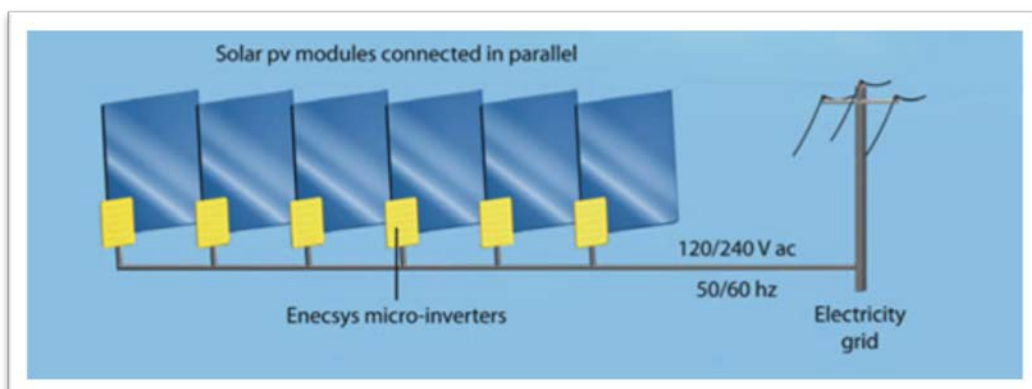


Figure 2 – AC PV modules

Both AC and DC PV modules or panels are included in the description of the goods.

### **3.3 Tariff classification**

The goods are classified to the following tariff subheadings in Schedule 3 to the *Customs Tariff Act 1995*:

- 8541.40.00, statistical code 53;
- 8501.61.00, statistical codes 33 and 24;
- 8501.62.00, statistical code 34;
- 8501.63.00, statistical code 40; and
- 8501.64.00, statistical code 41.

The then Australian Customs and Border Protection Service's<sup>12</sup> (ACBPS) tariff branch advised the Commission that the goods can be imported under tariff classification subheadings 8541 and 8501. The Commission notes that the goods are defined by the description, not the tariff classification.

The rate of Customs duty payable under each of the tariff subheadings is as follows:

- 8541.40.00 (statistical code 53); 8501.63.00 (statistical code 40) and 8501.64.00 (statistical code 41) are duty free; and
- 8501.61.00 (statistical codes 33 and 24) and 8501.62.00 (statistical code 34) have a duty rate of 5 per cent for all countries except for DCS countries (4 per cent) and DCT (5 per cent). China is defined as DCS therefore duty is payable at the rate of 4 per cent.

There is currently no tariff concession order (TCO) applicable to the goods.

### **3.4 Like goods legislation framework**

s.269TC(1) of the Act requires that the Commissioner must reject an application for a dumping duty notice if, inter alia, the Commissioner is not satisfied that there is, or is likely to be established, an Australian industry in respect of like goods.

In making this assessment, the Commissioner must firstly determine that the goods produced by the Australian industry are "like" to the imported goods. s.269T(1) defines like goods as:

*"Goods that are identical in all respects to the goods under consideration or that, although not alike in all respects to the goods under consideration, have characteristics closely resembling those of the goods under consideration."*

An Australian industry can apply for relief from injury caused by dumped imports even if the goods it produces are not identical to those imported. The industry must however, produce goods that are "like" to the imported goods.

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<sup>12</sup> From 1 July 2015 the Australian Customs and Border Protection Service (ACBPS) was integrated with the Department of Immigration and Border Protection (DIBP) and the Australian Border Force (ABF) was established within DIBP.

## PUBLIC RECORD

Where the locally produced goods and the imported goods are not alike in all respects, the Commissioner assesses whether they have characteristics closely resembling each other against the following considerations:

- i. physical likeness;
- ii. commercial likeness;
- iii. functional likeness; and
- iv. production likeness.

### 3.5 Like goods assessment

From the available information, the Commission has identified that Tindo is the sole Australian producer of the 'like goods' (the 'Australian industry'). Section 4 of this report discusses the Commission's findings regarding the 'like goods' manufactured by the Australian industry.

The Australian industry manufactures a range of PV modules or panels measured in terms of power output (W) that are either currently produced, or are certified by the Clean Energy Council of Australia to be produced by Tindo in the future. The goods description does not limit the goods under consideration to PV modules or panels of particular power output. The goods currently produced by Tindo that are slightly above or slightly below the range of power output are considered to be 'like' goods. This is because the number of PV modules or panels can be varied to achieve the same level of power output.

The Commission has assessed, based on the information currently before it, that Tindo has demonstrated the following in relation to PV modules or panels:

(i) Physical likeness

PV modules or panels manufactured by Tindo generally have the same rectangular shape, dimensions and appearance as those imported. Tindo's PV modules or panels predominately include micro-inverters (AC modules), whilst the imported panels are predominantly imported without the inverters (that is, as DC modules). All PV modules or panels are required to meet the same standards in order to be installed in the Australian market for the end-use application.

(ii) Commercial likeness:

PV modules or panels manufactured by Tindo and imported PV modules or panels directly compete across all Australian market sectors, namely residential and commercial applications. The goods are distributed in the market either by direct sales and/or installation to the end-user by the importer or the Australian industry, or via a distribution network of retailers and/or installers.



(iii) Functional likeness

The imported PV modules or panels and the Australian produced PV modules or panels are put to the same end-use, which is to convert sunlight to electricity. Although different panels may have different power outputs (for example some PV modules have an on-board micro-inverter while some are connected to an inverter), the primary function remains the same being the generation of 240 volts AC power.

(iv) Production likeness

PV modules or panels manufactured in Australia, and imported PV modules or panels are produced in a similar manner subject only to varying degrees of automation. The same raw material inputs (solar PV cells) are used, which is separately patented technology.

Based on the above assessments, the Commissioner is satisfied that the Australian industry produces like goods to the goods the subject of the application, as defined in s.269T of the Act.

### **3.6 Interested party claims – the goods, like goods and requests to exempt goods**

The Commission has received submissions from various interested parties throughout the investigation relating to particular imported goods that should be exempted from anti-dumping measures due to the Australian industry not producing like or directly competitive goods to those imported.

The submissions have claimed that:

- (i) PV modules or panels producing power output greater than or equal to 300 watts should be excluded from the investigation based on the following reasons:
  - PV modules or panels with power output of 300 watts and above are predominantly ground-mounted and are used for utility projects by large scale solar farms; and
  - Tindo did not produce, and is not certified by the Clean Energy Regulator to produce, PV modules or panels with power output of 300 watts and above.
  
- (ii) the following PV modules or panels producing power output less than or equal to 200 watts should be excluded from the investigation because Tindo does not manufacture such PV modules or panels:
  - PV modules or panels with power output of equal to or less than 200 watts are predominantly used for charging 12 volt lead-acid batteries that are used for recreational and outdoor activities such as camping, caravanning, marine etc.;

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- PV modules or panels used to generate electricity for 'stand-alone' power systems such as electric gates, irrigation flume gates for use by farmers, illuminated signage for roads etc.; and
- 'Double Glass' (also known as glass-glass) PV modules or panels as Tindo does not produce these types of PV modules or panels.

As the Commissioner has terminated the investigation, the Commission did consider these submissions in detail.

## 4 THE AUSTRALIAN INDUSTRY

### 4.1 Finding

s.269T(2) of the Act specifies that for goods to be regarded as being produced in Australia, they must be wholly or partly manufactured in Australia. s.269T(3) of the Act provides that in order for the goods to be considered as partly manufactured in Australia, at least one substantial process in the manufacture of the goods must be carried out in Australia.

There is an Australian industry consisting of Tindo that produces like goods in Australia.

### 4.2 Production process

In May 2014, a verification team from the Commission undertook a visit to Tindo's premises and manufacturing facility in Mawson Lakes, South Australia. The verification team observed Tindo's production process of PV modules or panels to be as follows:

- cells are loaded into the Tabbing Machine, which then automatically picks up, positions and solders the cells into strings;
- the Lay-up machine arranges the strings into the required panel configuration;
- the Bussing machine utilises robotics to solder the ribbons to the front and back of the cell. The automation process is extremely precise and monitors pre-heating and soldering temperatures to ensure a consistent and reliable electrical connection;
- the cells are then positioned on glass and a sheet of Ethylene Vinyl Acetate (EVA). A second layer of EVA is cut, positioned and taped into position over the cells;
- a back-sheet cutter/loader cuts the back-sheet which is placed on the panel and holes are cut in the back-sheet for the junction box connection;
- Electroluminescence (EL) testing is undertaken for all PV modules or panels to ensure that any cell defects are detected;
- the laminator heats the panel and cures the two sheets of EVA on the panel;
- after laminating, a visual inspection is undertaken where the operator exposes the panel to light and checks for visible defects;
- an aluminium frame is pressed onto the panel and an operator installs the junction box to the rear of the module;
- a PV Simulation Test is then undertaken to ensure that the panel is generating power as rated to its specifications;
- for AC modules, an operator then attaches a micro-inverter to the rear of the panel and connects to the junction box; and
- the panel is ready for dispatch after the final good is recorded in the daily production record register.

Tindo produces both AC and DC PV modules or panels using the above manufacturing processes. The only difference is that the AC PV modules or panels are ready to be plugged into the grid by the use of an on-board micro-inverter, while the DC PV module or panels needs to be connected to a separate inverter that converts the energy generated to AC power as detailed in section 3.2 of this report.

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The Commission is satisfied that Tindo is the sole producer of PV modules or panels in Australia. Accordingly, the Australian industry consists of Tindo alone.

### **4.3 Interested party claims**

The Commission has received submissions from various interested parties throughout the investigation claiming that Tindo does not partly manufacture or carry out a substantial process of manufacturing the PV modules or panels in Australia as all the major raw materials are sourced from overseas, predominantly from China.

Based on the Commission's inspection of Tindo's manufacturing plant and the production processes discussed above, the Commission is satisfied that at least one substantial process of manufacture is performed in Australia and that, therefore, the goods are produced in Australia.

## 5 AUSTRALIAN MARKET

### 5.1 Finding

The Australian market for PV modules or panels is supplied by the Australian industry and imports, predominantly from China.

### 5.2 Background

The Commission considers that the PV modules or panels market in Australia is primarily driven by the residential and commercial sectors. PV modules or panels are supplied by imports from China (over 89 per cent during the investigation period), Singapore, Germany, Korea and other countries and local production by Tindo. Tindo did not import any PV modules or panels during the investigation period.

#### 5.2.1 Type of PV cells

As discussed in Section 3 of this report, there are two types of cells, being poly-crystalline cells and mono-crystalline cells, used to manufacture PV modules or panels. Towards the end of the investigation period there was a clear shift in exporters to Australia moving away from mono-crystalline cells (as they are more expensive) to poly-crystalline cells. Tindo used only poly-crystalline PV cells to produce PV module or panels during the investigation period.

#### 5.2.2 AC and DC PV modules or panels

As detailed in Section 3 of this report, the two forms of power generated by the two different types of PV modules or panels are AC and DC. The Australian industry predominantly produces AC PV modules or panels, which are more expensive, compared to DC PV modules or panels due to various advantages as discussed in this report. None of the four selected exporters in this investigation exported AC PV modules or panels to Australia during the investigation period. Based on the Australian Border Force (ABF) import database, the Commission estimated that exports of AC models accounted for less than 1 per cent of all PV modules or panels exported to Australia from China.

### 5.3 Market structure

#### 5.3.1 Australian production

The application was lodged by Tindo, the sole Australian manufacturer of like goods.

Tindo is a newly established Australian company that commenced operating in July 2012. Tindo manufactures the goods while its related entity, Tindo Solar Pty Ltd (Tindo Solar), is responsible for the sale of the goods into the residential sector of the Australian market. Another related entity, Tindo Commercial Pty Ltd (Tindo Commercial), is responsible for the sale of the goods into the commercial sector of the Australian market

Tindo submitted detailed financial data in its application for the investigation. The Commission undertook verification of this data with Tindo.

### **5.3.2 Importers**

The Commission performed a search of the ABF import database and identified around 500 potential importers of PV modules or panels.

The Commission identified six major importers (by volume) and sought their cooperation with the investigation through the completion of an Importer Questionnaire. Five of those importers fully cooperated with the Commission's request, and verification visits were undertaken. These importers are as follows:

- Renesola Australia Pty Ltd;
- Solargain PV Pty Ltd;
- Solar Juice Pty Ltd;
- Trina Solar Ltd; and
- True Value Solar Pty Ltd.

The Commission estimates the above importers collectively account for approximately 28 per cent of the volume of the goods imported from China during the investigation period.

### **5.4 Market size and share**

The Commission had difficulty in identifying total imports of PV modules or panels under the relevant tariff classification from the ABF import data as it contained various goods, including goods not subject to this application such as power generators and alternators, components and kits of PV modules or panels such as solar PV cells, semi-conductor devices and other electrical goods. Furthermore, the goods description in the ABF import data did not identify the PV modules or panels in terms of power output (watts), whether poly-crystalline or mono-crystalline, and whether it was AC or DC PV modules or panels.

The Commission attempted to cleanse the ABF import data by filtering the description of the goods by 'solar panels', 'arrays', and 'modules'. The Commission then eliminated all goods with unit prices less than \$100 and greater than \$2,000 to eliminate imports that the Commission considered would clearly not be the goods based on their price.

The Commission considers that the cleansed ABF import data provides a reasonable estimate of the total imports of the goods in the investigation period, notwithstanding that the goods are imported under various tariff classifications that include some goods that are not the subject of the application.

The sales data submitted by Tindo in relation to its own sales has been verified by the Commission, as outlined in the Australian industry verification report (available on the Commission's website). This sales data was found to be complete, relevant and accurate.

Figure 3 indicates the volume of sales (units) for PV modules or panels from 1 January 2010 to 31 December 2013 using ABF import database and Tindo's sales volume (units) from 1 July 2012 to 31 December 2013.

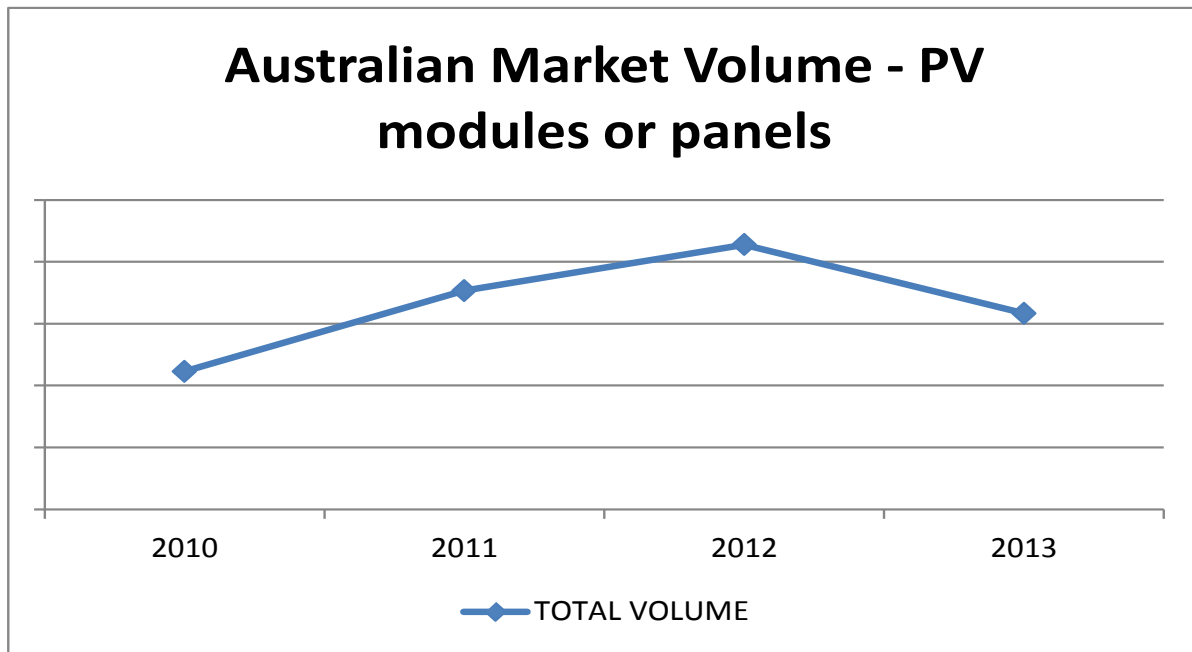


Figure 3: Sales volume (units) of PV modules or panels

Figure 3 illustrates that the sales volume (in terms of units) of PV modules or panels peaked in 2012 and declined in 2013.

The Commission has estimated Tindo's share of the Australian market to be less than one per cent of the units sold during the investigation period.

## 5.5 Market segmentation and end use

The Australian PV modules or panels market is split into the commercial<sup>13</sup> and residential sectors. The commercial sector can be distinguished between the following segments:

- commercial-scale system (>30kW); and
- small-scale systems (<30kW).

According to the Green Energy Markets Report dated December 2014, approximately 85 per cent of the PV modules or panels installed in Australia during the investigation period were supplied to the small-scale residential sector and the remainder was supplied to the commercial sector.<sup>14</sup>

## 5.6 Government Support

The Australian, State and Territory Governments have variously established policies and provided incentives to encourage the development of clean energy sources in Australia, such as energy generated by PV modules or panels and wind towers. Some of these

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<sup>13</sup> For the purpose of this report, the commercial sector includes the industrial sector.

<sup>14</sup> Green Energy Markets Report – December 2014

incentives are discussed below.

### 5.6.1 Feed-in-Tariffs

Feed-in tariffs (FIT) are a form of payment for the electricity that is put back into the electricity grid. The FIT rates vary between the States and Territories.

The FIT rates started to decline from 2010 and some State and Territory Governments have recently abolished FIT incentives, as shown in Figure 4 below.

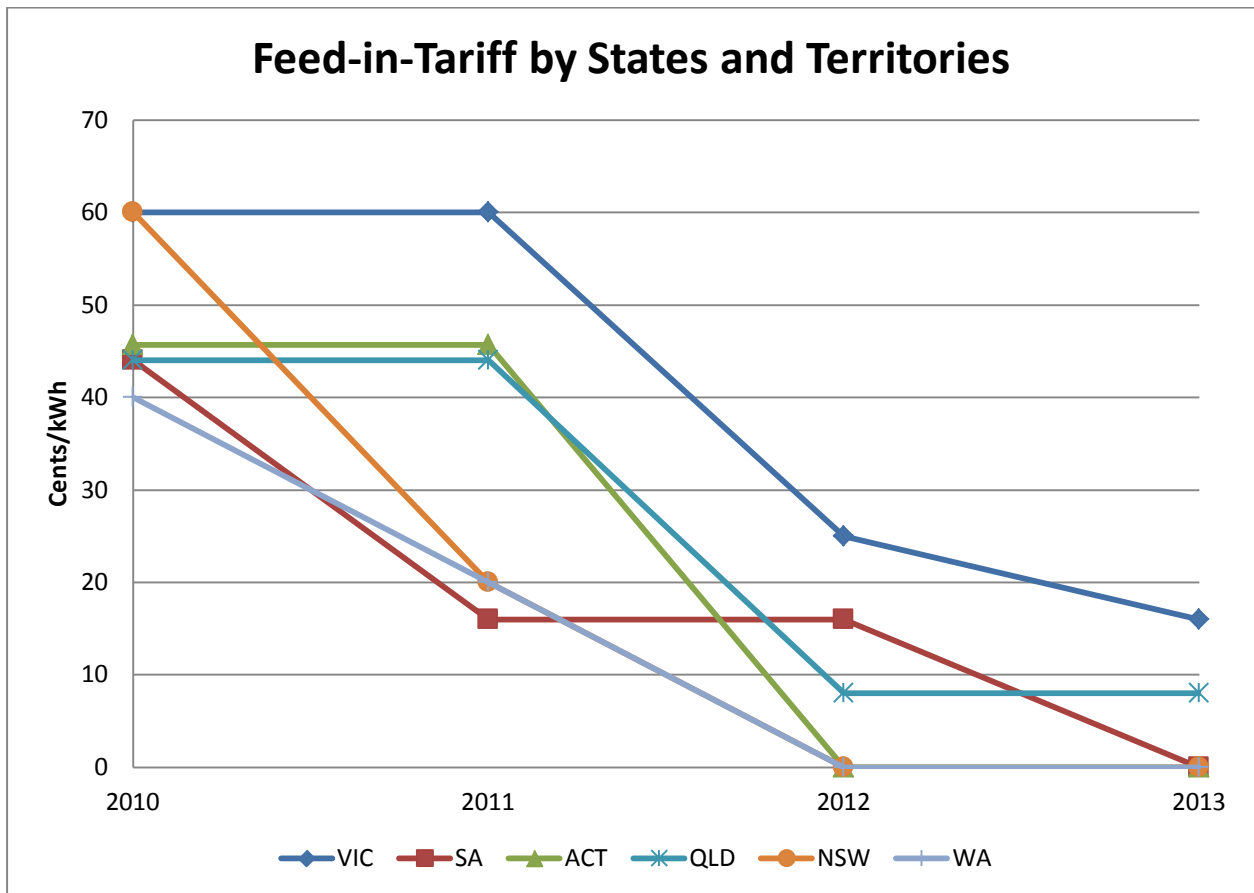


Figure 4 – Feed-in-Tariff from 2010 to 2013<sup>15</sup>

The Commission considers that the reduction of FIT rates by the various States and Territories had a direct negative impact on the PV modules or panels market in Australia, as illustrated in figure 3.

<sup>15</sup> Data has been collected using individual State and Territory Government websites and from the information provided by the Clean Energy .



## 5.6.2 Other forms of incentives

- (i) *Renewable energy targets (RET)* - the Australian Government's renewable energy target<sup>16</sup> has been in operation since 2001. In 2009, the RET was increased to ensure renewable energy comprised 20 per cent (up from 2 per cent), or about 41,000 gigawatt (GW) hours of electricity supply in Australia by 2020.

The RET comprises two components: the Small-scale Renewable Energy Scheme (which supports the installation of small-scale renewables like roof top solar panels and solar hot water systems) and the Large-scale Renewable Energy Target (which creates incentives for the establishment of renewable power stations, such as solar, wind and hydro-electric).

The RET scheme is designed to provide financial incentives to both large-scale renewable power stations and the owners of small-scale systems to create renewable energy certificates for every megawatt hour of power generated. The number of RET certificates peaked in 2012 and then began to decline in line with the declining PV modules or panels market.

- (ii) *Small-scale Technology Certificates (STC)* are a tradable commodity attached to eligible installations of renewable energy systems, such as PV modules or panels, solar water heaters etc. When an eligible system is installed, a number of STCs can be claimed by residential households or commercial businesses depending on the geographic location, the kind of system being installed and the size of the system.

The number of STC's in all States and Territories other than Tasmania and the Northern Territory<sup>17</sup> peaked in 2011 and then began to decline.

- (iii) *Rebates* - the Federal Government provided rebates of up to \$8,000 for installing PV modules or panels on homes and community buildings (other than schools), through the *Solar Homes and Communities Plan*. In June 2009 this program was replaced by the *Solar Credits Program*.

Schools were eligible to apply for grants of up to \$50,000 to install 2 kW solar panels under the *National Solar Schools Program (NSSP)*<sup>18</sup> from July 2008 to November 2012. NSSP was abolished in November 2012.

- (iv) *Subsidy funding* - in 2009, the *Solar Flagships Program* was established. Through this program \$1.6 billion was set aside by the Australian Government for the construction and demonstration of large-scale grid-connected solar power stations in Australia. While the funding is still available, the Commission is not aware of any successful projects that benefitted from this program.

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<sup>16</sup> Previously known as the Mandatory Renewable Energy Target.

<sup>17</sup> No data was available for Tasmania and Northern Territory.

<sup>18</sup> This program was later replaced by '*Green Vouchers for Schools program*'.

## **5.7 Interested party claims**

Several interested parties claimed Tindo entered the PV modules or panels market when demand for PV modules or panels had started to decline, mainly due to the phasing out of the FITs across all states. Furthermore, the submissions claimed that Chinese exporters involved in the investigation are the largest producers of PV modules and panels in the world and are hence able to take advantage of 'economies of scale' and technological efficiencies.

As a result of the incentives described in section 5.6, in particular the introduction of the FITs, the small-scale PV modules or panels industry grew significantly from 2009 to 2010. However the phasing out of the various tariffs/rebates resulted in PV modules or panels installations falling by 5 per cent in 2012 and a further 40 per cent in 2013<sup>19</sup>. The Commission notes that Tindo entered the market in July 2012, when the various incentives and tariff schemes were either reducing or were abolished.

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<sup>19</sup> Source: Clean Energy Regulator

## 6 DUMPING INVESTIGATION

### 6.1 Findings

PV modules or panels exported to Australia from China in the investigation period were dumped and the volume of dumped goods was not negligible.

Dumping margins for exporters are summarised in the following table:

Exporter / Manufacturer	Product dumping margin
Changzhou Trina Solar Energy Co. Ltd; and Trina Solar (Changzhou) Science and Technology Co. Ltd	19.9%
ET Solar Energy Limited; ET Solar Industry Limited; and ET Energy Co. Limited	19.8%
Wuxi Suntech Power Co., Ltd	38.8%
ReneSola Jiangsu Limited and ReneSola Zhejiang Limited	16.1%
Residual Exporters	21.1%

NB: While Wuxi Suntech Power Co., Ltd has the highest dumping margin, it exported a very small volume of PV modules or panels during the investigation period

The Commission's calculations of export prices, normal values and dumping margins in respect of PV modules or panels are at **Confidential Appendix 4**.

### 6.2 Selection of exporters

Section 269TACAA(1) of the Act states that where the number of exporters from a particular country in relation to the investigation is so large that it is not practicable to examine the exports of all those exporters, an investigation may be carried out 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 be reasonably examined.

Prior to initiation of the investigation, a preliminary search of the ABF import database identified a large number (around 500) of Chinese suppliers of the goods during the investigation period. The Commission identified that the top four exporters accounted for around 35 per cent of the volume of units exported to Australia. The individual export volumes by the remaining suppliers each represented 2 percent or less of the total export volume from China.

The top four exporters were selected for examination and asked to complete an exporter questionnaire. The Commission has, as provided under Section 269TACAA, used the information analysed for the selected exporters to make findings as to whether all other exporters have dumped the goods exported to Australia during the investigation period.

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The Commission classified all exporters from China other than the four selected exporters as 'residual' exporters.

Detailed information about the exporter sampling process used for this investigation is in the 'Sampling Report' which is available on the Commission's website<sup>20</sup>.

### 6.2.1 Selected exporters

The exports of the following four exporters of PV modules or panels from China were selected for examination:

- Renesola Jiangsu Ltd;
- Trina Solar Ltd;
- ET Solar Energy Limited; and
- Wuxi Suntech Power Co. Ltd.

These four exporters are considered to be responsible for the largest volume of exports to Australia that can reasonably be examined.

The Commission invited these exporters to complete an Exporter Questionnaire containing necessary information to determine whether the goods were exported at dumped prices.

The Exporter Questionnaire sought information regarding the exporters' commercial operations and the goods exported to Australia, as well as information regarding the exporters' foreign and domestic sales, relevant costing information and information relevant to the assessment of whether a market situation exists.

All four of these selected exporters fully cooperated with the investigation and submitted responses to the Exporter Questionnaire within the required timeframe.

The Commission visited all four selected exporters between September and December 2014 to verify the data submitted in their Exporter Questionnaire response, and to identify and verify any other information relevant to this investigation. The public record version of the verification reports for each of the exporters is available on the Commission's website.

The Commission used the exporters' Exporter Questionnaire responses, information gathered and verified during the Commission's verification visits and replaced the costs of self-produced and domestically purchased PV cells with the benchmark prices after a particular market situation was found (section 6.3 refers) to determine dumping margins for each selected exporter.

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<sup>20</sup> <http://www.adcommission.gov.au/cases/Documents/039-Notice-Exportersamplingnotification.pdf>

## **6.2.2 Residual exporters**

Section 269T(1) of the Act defines a residual exporter as:

...

*an exporter of goods that are the subject of the investigation, review or inquiry, or an exporter of like goods, where:*

- (d) the exporter's exports were not examined as part of the investigation, review or inquiry; and*
- (e) the exporter was not an uncooperative exporter in relation to the investigation, review or inquiry.*

For the purposes of this investigation, the Commission considers that residual exporters are all exporters of PV modules or panels from China during the investigation period, other than the four selected exporters named in section 6.2.1 of this report. The residual exporters were under no obligation to complete the Exporter Questionnaire.

Section 269TACAA(2) of the Act provides that if information is submitted by an exporter not initially selected for the purpose of an investigation, the investigation must extend to that exporter unless to do so would prevent the timely completion of the investigation.

The following eight residual exporters provided questionnaire responses to the Commission within the required timeframe:

- Shanghai JA Solar Technology Co., Ltd;
- Hefei JA Solar Technology Co., Ltd;
- Econess Energy Co., Ltd;
- Zhejiang Sunflower Light Energy Science & Technology Limited Liability Company;
- Simax (Suzhou) Green New Energy Co., Ltd;
- Jiangsu Seraphim Solar System Co., Ltd;
- Wuxi C.A.N. Import & Export Co., Ltd; and
- Ningbo Qixin Solar Electrical Appliance Co., Ltd.

Given the high number of residual exporters seeking individual dumping margins and the timeframe for completion of the investigation, the Commission considers that making individual assessments of dumping for each of the eight exporters that completed a questionnaire would prevent the timely completion of the investigation.

Therefore, all exporters who provided information in response to the exporter questionnaire that were not selected to be part of the sample are considered residual exporters. In calculating dumping margins for residual exporters (including the residual exporters who opted not to complete the exporter questionnaire), the Commission will not calculate:

- export prices that are less than the weighted average of export prices for cooperative exporters, excluding those export prices from cooperative exporters whose dumping margins were less than 2 per cent<sup>21</sup>; and
- normal values that exceed the weighted average of normal values for cooperative exporters, excluding those normal values from cooperative exporters whose dumping margins were less than 2 per cent.<sup>22</sup>

### **6.3 Particular market situation**

China is treated as a market economy under Australia's Anti-Dumping provisions. Australia's provisions are in accordance with the World Trade Organization (WTO) Anti-Dumping Agreement (ADA) and provide for the rejection of domestic selling prices where it can be established that a situation in the market for the goods in the exporting country renders domestic selling prices unsuitable for normal value purposes.

Generally, the Commission calculates the normal value of the goods as the price for like goods sold for home consumption in the country of export (s. 269TAC(1) of the Act refers).<sup>23</sup>

One of the exceptions to using domestic selling prices for determining normal values is set out in s. 269TAC(2)(a)(ii) of the Act, which broadly provides that the domestic selling prices are not an appropriate basis for normal value if the Minister is satisfied that:

*"...the situation in the market of the country of export is such that sales in that market are not suitable for use in determining a price under [s.269TAC(1)]"* (i.e. a 'particular market situation' exists).

One of these situations may be where the domestic selling prices in the country of export have been materially affected by government influence rendering those prices unsuitable for use in establishing normal values.

The existence of a particular market situation potentially affects the approach that the Commission takes to calculating normal values under the Act when undertaking an assessment of whether goods have been exported to Australia at dumped prices.

#### **6.3.1 Tindo's market situation claims**

In its application, Tindo submitted that domestic prices of PV modules or panels in China are not suitable for the determination of normal values under s.269TAC(1) of the Act, as a particular market situation in relation to those goods renders those domestic selling prices unsuitable.

Tindo submitted that the Government of China's (the GOC) involvement in the Chinese domestic PV modules or panels industry has materially distorted competitive conditions in China in terms of the GOC providing 'policy loans' and credit facilities by the state owned Chinese banks at preferential rates that do not take into account commercial risk and prudential lending practices that otherwise applied in the Chinese capital credit market.

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<sup>21</sup> In accordance with s.269TACAB(2)(c) and (3)(b).

<sup>22</sup> In accordance with s.269TACAB(2)(d) and (3)(b).

<sup>23</sup> This price is subject to adjustments under s.269TAC(8) of the Act to ensure any differences do not affect the comparison with the export price.

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Tindo claimed that this has resulted in a particular market situation making PV modules or panels prices in the Chinese domestic market unsuitable for normal value purposes.

### **6.3.2 The Commission's assessment**

The only evidence provided by Tindo in its application to support its market situation claims was in relation to the alleged provision of 'policy loans' to manufacturers of PV modules or panels by the GOC. In its examination of the selected exporters, the Commission did not find any evidence to suggest that the alleged 'policy loans' created a particular market situation such that the domestic selling prices of the PV modules or panels in China would not be suitable for normal value.

In its consideration report for this investigation (CON 239) the Commission considered that one of the main raw materials used in the production of solar PV cells is silicon metal. At that time the Commission was also investigating the alleged dumping and subsidisation of silicon metal exported to Australia from China (Investigation number 237 (INV 237) refers). The applicant in that investigation alleged that the selling price of silicon metal in China is not suitable for the purpose of establishing normal value. In CON 239 the Commission suggested that the findings in INV 237 may be relevant to the assessment of a particular market situation in relation to PV modules or panels.

During this investigation, the Commission found that in INV 237 the subject raw materials were 'metallurgical grade silicon', which is different to 'solar grade silicon'. In its submission, the CCCME stated that metallurgical grade silicon normally contains 89 per cent to 99 per cent of silicon, while solar grade silicon requires a purity of '6N' which has at least 99.99 per cent silicon. The CCCME also stated that the metallurgical grade silicon is mainly used by aluminium producers and the chemical industry, while solar grade silicon is used for PV products and the semiconductors industry.<sup>24</sup>

The Commission had not received any submissions from interested parties disputing the CCCME's claims. The Commission considers that the findings in INV 237 are therefore not relevant to its assessment of a particular market situation in this investigation.

At the time of publishing the SEF, the Commission had found no evidence that the GOC's involvement in the Chinese domestic PV modules or panels industry had materially distorted competitive conditions in China, such that the domestic selling prices of PV modules or panels would not be suitable for normal value.

### **6.3.3 Tindo's Submission – Post SEF**

In response to the SEF, Tindo provided additional information based on preliminary findings by the Canada Border Services Agency (CBSA), published on 20 March 2015, in relation to its investigation of alleged dumping and subsidisation of PV modules and laminates exported to Canada from China. The CBSA's report stated that the Government of China through its various policies and measures has influenced the prices of PV modules and laminates in the Chinese domestic market such that domestic prices are not substantially the same as they would be in a competitive market. On 18 June 2015, the CBSA published its final report affirming its preliminary findings.

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<sup>24</sup> The Public Record version of the CCCME submission is on the Commission website.

### 6.3.4 The Commission's assessment

Having granted extension of time to the due date for the final report by the then Parliamentary Secretary as discussed in section 2.3 of this report, the Commission prepared a questionnaire for the GOC, seeking information relevant to the assessment of a particular market situation allegation. The GOC declined to respond to the questionnaire. In an email dated 2 July 2015, the GOC stated that its views on the matter are as per the letters it submitted to the Commissioner of 21 May 2015 and 2 June 2015. Public Record versions of the GOC email and letters are on the Commission's website.

The Commission engaged an external consultant, Dr George Barker of Law and Economic Consulting Associates Ltd (LECA), to independently examine whether and to what extent certain characteristics were present in the PV modules or panels market in China and provide a report to the Commission. LECA's terms of engagement are at **Non-Confidential Appendix 1**. A non-confidential version of Dr Barker's report has been published on the Commission's website.

In his report, Dr Barker concluded that, due to Government influences, the costs and prices of PV modules or panels are significantly distorted in China. Furthermore, Dr Barker considers that the influence of the GOC in the upstream polysilicon market would have affected prices for those raw materials and significantly reduced their cost of manufacturing PV cells.

At the time of publishing Dr Barker's report, the Commission included a file note clarifying that the '*language and interpretations of the report are those of the author. As with all submissions, the report does not necessarily represent the views of the Commission and is not necessarily endorsed by the Commission*<sup>25</sup>'. Dr Barker's findings have been challenged by a number of interested parties.

Based on the information gathered by Dr Barker, other relevant available information and its own research and analysis, the Commission has found that the GOC has significantly influenced the supply and demand of PV modules or panels, including the industries supplying major raw material inputs into the production of PV modules or panels during the investigation period. The Commission considers that the degree of influence makes domestic prices in the Chinese market to be unsuitable for the calculation of normal values.

The evidence and reasoning on which the Commission has relied to find that a particular market situation exists is at **Non-Confidential Appendix 2**.

### 6.3.5 Benchmark Prices for PV cells

The *Customs (International Obligations) Regulation 2015* (the Regulation) requires that if an exporter keeps records in accordance with generally accepted accounting principles and those records reasonably reflect competitive market costs associated with the

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<sup>25</sup> The Commission's full disclaimer regarding submissions that are published on the Electronic Public Record can be viewed on the Commission's website.



production of like goods then the cost of production must be worked out using the exporter's records.<sup>26</sup>

Having determined that a particular market situation exists, the Commission considers that the degree of influence on raw material input prices for PV cells would distort the cost of manufacturing photovoltaic modules or panels recorded in the accounts of domestic manufacturers in China. The Commission therefore considers the records of domestic manufacturers to be an unreliable measure of competitive market costs. Furthermore, the Commission has determined that the distortionary effect has impacted on the whole PV modules or panels industry, including the supply of its major raw materials (cells, wafers and polysilicon).

The Commission has therefore determined that it is appropriate to adjust the manufacturing costs of the cooperating exporters by reference to a suitable benchmark. In determining a benchmark, the Commission considered three options in order of preference based on WTO Appellate Body findings. They are as follows:

- private domestic prices;
- import prices; and
- external benchmarks.

The Commission has identified Bloomberg New Energy Finance (BNEF) as a suitable benchmark, and has adjusted the cost of PV cells of the four selected exporters used in the production of PV modules or panels.

A detailed analysis and the determination of benchmark prices for the mono-crystalline cells and for poly-crystalline cells is at **Non-Confidential Appendix 3**.

### **6.3.6 Benchmark Prices for Aluminium Extrusions**

On 19 August 2015, the Commission published its final report regarding the review of measures in relation to aluminium extrusions exported to Australia from China.<sup>27</sup> In that review, the Commission found that 'a particular market situation' exists in the aluminium extrusions market in China, such that the domestic sales were not suitable for establishing a normal value. The Commission used a benchmark price of the major raw materials and adjusted the cost of those raw materials based on their weight to constructed the normal value under s. 269TAC(2)(c) of the Act. The Commission then calculated the dumping margin based on the constructed normal value and export price.

The Commission noted that approximately 10 percent of the total cost to make and sell (CTMS) of PV modules or panels is represented by frames that are made from aluminium extrusions. Accordingly, the Commission sought from the four selected exporters their costs for aluminium extrusions used in the frames, and considered whether it was reasonable to replace these costs with a benchmark price.

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<sup>26</sup> Regulation 43(2).

<sup>27</sup> REP 248 refers, available at [www.adcommission.gov.au/cases/Pages/CurrentCases/EPR248.aspx](http://www.adcommission.gov.au/cases/Pages/CurrentCases/EPR248.aspx).

While all four exporters provided the requested information, the Commission noted that all four exporters purchased finished products (aluminium frames), and that some exporters purchased the frames by piece rather than by weight. The Commission noted that the review period for the aluminium extrusions review of measures (1 April 2013 to 31 March 2014) differed substantially from the PV modules or panels investigation period (1 July 2012 to 31 December 2013), which requires the Commission to make further assumptions before adjusting the benchmark price used in the review of aluminium extrusions case. Furthermore, the Commission observed that even if the weight of the frames purchased by the exporters could be established, the proportion of the price paid that comprised the cost of the original aluminium extrusions could not be reasonably calculated.

Given the small proportion that aluminium extrusions represents in the total cost to make (CTM) PV modules or panels (less than 10 per cent) and the other matters raised above, the Commission considered that it was not reasonable to make any adjustments to the cost of aluminium frames used in the production of PV modules or panels.

## **6.4 Dumping margins for selected exporters**

### **6.4.1 Trina Solar**

Trina Solar comprises a number of different entities. During the investigation period Changzhou Trina Solar Energy Co., Ltd (TCZ) and Trina Solar (Changzhou) Science and Technology Co., Ltd (TST) manufactured PV modules or panels. TCZ and TST sold PV modules or panels in the domestic market predominately through a related domestic trading company, Trina Solar Energy (Shanghai) Co., Ltd (TSH) and exported PV modules or panels to Australia through another two related trading companies, Trina Solar Energy Development PTE Ltd (TED) and Trina Solar (Australia) Pty Ltd (TAU).

Having established that TCZ, TST, TSH, TED and TAU (together referred to as Trina Solar in this report) are related entities, the Commission found that inter-company transaction between these entities were non-arms length and therefore collapsed them all together for the purpose of analysis and the calculation of a dumping margin. Further information concerning these entities can be found in the exporter visit report on the public record.

#### Export price

The Commission considers that:

- (i) in respect of export sales to Australia during the investigation period where TED purchased from TCZ and TST:
  - the goods have been exported to Australia otherwise than by the importer;
  - the goods have been purchased by the importer from the exporter;
  - the purchases of the goods by the importer were not arms length transactions; and
  - the goods are subsequently sold by the importer in the condition in which they were imported to a person who is not an associate of the importer.

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For these sales export prices have been established under s. 269TAB(1)(b) of the Act, being the price at which the goods were sold by the importer less the prescribed deductions as set out in s. 269TAB(2) of the Act; and

- (ii) in respect of export sales to Australia during the investigation period via TED and TAU:
- the goods have been exported to Australia otherwise than by the importer; and
  - the goods have not been purchased by the importer from the exporter.

For these sales export prices have been established under s. 269TAB(1)(c) of the Act, having regard to all the circumstances of the exportation, being the invoice price at which the goods were sold by TED or TAU to unrelated customers, less prescribed deductions.

### Normal value

Having made the findings outlined in section 6.3 of this report, the Commission has therefore constructed normal values under s.269TAC(2)(c) of the Act.

In the construction, the Commission has adjusted the cost of the major raw material (PV cells) using the Bloomberg New Energy Finance (BNEF) as an appropriate benchmark price for the mono-crystalline cells and for the poly-crystalline cells.

The costs of cells that were either self-manufactured or purchased domestically by TCZ or TST were also adjusted. In the periods (months) were the Commission found that the weighted average cost of cells were:

- higher than the benchmark prices, downward adjustments were made; and
- lower than the benchmark price, upward adjustments were made.

No adjustment was made to the cost of cells that were imported and were used in the production of PV modules or panels that were exported to Australia.

An ordinary course of trade (OCOT) profit was added to the total revised CTMS. The Commission made adjustments for export inland freight, in accordance with s.269TAC(8), to ensure a fair comparison of normal values with export prices.

### Dumping margin

The dumping margin for Trina Solar was established in accordance with s.269TACB(2)(a) of the Act, 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.

The dumping margin for Trina Solar is 19.9 per cent.

#### **6.4.2 Trina Solar's submission – Pre SEF**

In a submission<sup>28</sup> to the Commission following publication of its verification visit report<sup>29</sup> Trina Solar claims that:

- (i) the Commission has found no evidence that the sales between TCZ/TST and TED/TAU were non-arm's length transactions;
- (ii) an excessive rate of profit has been used by the Commission when calculating the deductive export price using TED and TAU sales to unrelated customers;
- (iii) part of the data has been omitted when calculating the export price;
- (iv) the weighted average cost difference between the poly-crystalline and mono-crystalline PV modules or panels should be calculated as an annual amount over the investigation period and not on a quarterly basis as determined by the Commission; and
- (v) an excessive amount of profit has been used by the Commission when calculating normal value for mono-crystalline PV modules or panels under s.269TAC(1) of the Act.

The Commission has considered the issues raised by Trina Solar in its submission as discussed below:

(i) *Non-arm's length transactions between TCZ/TST and TED/TAU*

The Commission found that the sales between TST/TCZ and TED/TAU are non-arm's length transactions for the reasons discussed in the exporter visit report (section 4.7 of the visit report). As discussed in the report the selling and administration expenses in relation to the sales made by TAU on behalf of TED were reimbursed by TCZ. The report also discussed that the income statement for FY2013 and for the 6 months to 31 December 2012 indicated that sales of PV modules or panels imported and sold by TAU and by TED in the Australian market during the investigation period were not profitable.

On 4 November 2014, subsequent to the Commission's verification visits, Trina Solar provided additional information in respect of the sales of PV modules or panels to unrelated Australian customers by TAU/TED that were sourced from TCZ/TST. That additional information included the purchase quantity (watts) and purchase price (USD) on a transaction by transaction basis. This was new information. Trina Solar did not provide any source documents in relation to those purchases such as invoices or proof of payments. In addition, in Trina Solar's calculation of the profitability of the sales by TAU/TED it did not include any selling, general and administrative (SG&A) expenses in relation to those sales. The Commission does not consider the information provided with the submission warrants an amendment to the original methodology applied.

In accordance with s269TAA(2), for the reasons outlined in the exporter visit report, the Commission considers that the sale of the imported PV modules or panels by TAU and TED at a loss should be treated as indicating that the importer will, directly or indirectly, be reimbursed, be compensated or otherwise

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<sup>28</sup> Public Record version of Trina Solar's submission dated 16 March 2015.

<sup>29</sup> Trina Solar's verification visit report was published on the Commission's website on 10 March 2015.

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receive a benefit in respect of the whole or part of the price. Pursuant to s269TAA(1) the Commission has therefore treated the export sales between TCZ/TST and TED/TAU as not being at arms length.

- (ii) *Excessive rate of profit has been used by the Commission when calculating the deductive export price*

s.269TAB(2)(c) of the Act states that the amount added should be “...the profit, if any, on the sale by an importer or, where the Minister directs, an amount calculated in accordance with such rate as the Minister specifies in the direction as the rate of profit on the sale by the importer”.

Since TED and TAU are related entities to TCZ/TST, and the Commission found that the sales between the related entities are non-arms length, the profit used in the calculation was based on an average amount of profit of three importers that were unrelated to their suppliers. Trina Solar claims that the profit of a similar importer, meaning one that sells to distributors only, should be used. The Commission considers the average profit achieved by the three importers adequately and appropriately reflects a profit that could be derived in transactions between parties at arms length.

- (iii) *Error in the calculation of export price due to omission of some data*

As noted in section 6.4.1 of this report and also detailed in Trina Solar’s exporter visit report, the company exported PV modules or panels through various channels. The Commission found that data provided in the spreadsheet for TED’s export sales of product manufactured by TST appears to be duplicated in the sales spreadsheets provided for TED and TAU as importers. The data in the two spreadsheets suggests that the ‘customer details’, ‘date of sale’, ‘quantity’ and ‘value’ of some of the sales closely resemble each other. To further confirm this the Commission compared the total number of PV modules or panels exported as per the ABF import database, with the volume set out in the various export sales spreadsheets of the Trina Solar entities. If the sales data that Trina Solar claims has been omitted is added to the existing export volumes used by the Commission in its calculation, the total imports exceeds the volume in the import database by approximately 13 per cent. Therefore, the Commission does not consider that any relevant data has been omitted when calculating the export price.

- (iv) *Cost difference to be calculated over the investigation period*

The Commission considers that it is reasonable to calculate the normal value of mono-crystalline PV modules by adding the quarterly CTMS difference between poly-crystalline and mono-crystalline PV modules (USD per watt) during the investigation period because there are fluctuations in the unit costs of mono-crystalline PV modules or panels in different quarters during the investigation period.

- (v) *Amount of profit used to calculate normal value*

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Regulation 43(2) states that “... *the Minister must, if reasonably possible, work out the amount [of profit] by using data relating to the production and sale of like goods by the exporter or producer of the goods in the ordinary course of trade.*” [emphasis added]

As discussed in this report, poly-crystalline PV modules or panels are like goods to mono-crystalline PV modules or panels. The Commission therefore determined the profit using all sales of the ‘like goods’ (poly-crystalline and mono-crystalline) in the ordinary course of trade in the domestic market during the investigation period.

### 6.4.3 Trina Solar’s submissions - Post SEF

Following the publication of the SEF, Trina Solar made several submissions dated 13 April 2015; 6 May 2015; 29 June 2015; 7,13,15,17 July 2015; 5,13,31 August 2015; and 4,16, 21, 28 September 2015. Non confidential versions of these submissions are available on the Commission’s website. The issues raised in the submissions and the Commission’s responses are discussed below.

In its submission dated 13 April 2015, Trina Solar submitted the following issues:

- (i) *Arm’s length transactions* - Trina Solar reiterated its earlier claims that the sales between TCZ/TST and TED /TAU were arms length transactions.
- (ii) *Rate of Profit used in deductive export price calculation* - Trina Solar claims that the Commission included a ‘grossly inflated’ net profit margin in its deductive export price calculations in respect of the goods imported by TED/TAU. Trina Solar claim that the Commission does not appear to have considered the impact of the level of trade and nature of goods sold by other importers’ profitability when calculating average profit achieved by those importers and used in deductive export price for Trina Solar.
- (iii) *Error in the calculation of export price* – Trina Solar submitted that the Commission’s calculation of the weighted average export unit price does not include the unit export price of TED’s export sales to unrelated Australian importer customers.
- (iv) *Normal value calculation of mono-crystalline PV modules or panels* – Trina Solar submitted that the normal value for mono-crystalline PV modules or panels calculated by the Commission is in excess of the price effect of the difference between mono- crystalline and poly-crystalline modules.

The Commission’s consideration of the issues raised by Trina Solar is discussed below:

- (i) The Commission re-considered Trina Solar’s claims in relation to items (i) arms length transactions between TCZ/TST and TED /TAU and (ii) the rate of profit used to calculate deductive export price. The Commission noted that no further evidence was provided by Trina Solar to support its claims regarding these issues. Therefore, based on the detailed discussions at section 6.4.2 of this report, the Commission affirmed its earlier decision.
- (ii) *Error in the calculation of export price* - The Commission noted that part of the export sales to unrelated parties by TST was omitted when calculating the

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export price. Accordingly the Commission rectified this error and re-calculated export price.

- (iii) *Normal Value* - Having found that a particular market situation exists in the PV modules or panels market in China such that the domestic sales are not suitable for establishing normal values under s.269TAC(1) of the Act, the Commission re-calculated normal values for all models of poly-crystalline and mono-crystalline PV modules or panels in accordance with s.269TAC(2) (c) as discussed in section 6.4.1 of this report.

In a submission dated 6 May 2015, Trina Solar expressed its concerns regarding the Commissioner's acceptance of Tindo's late submission in response to the SEF. Trina Solar stated that the Commissioner is not obliged to have regard to any submission made after 27 April 2015 if to do so would, in the opinion of the Commissioner, prevent the timely termination or preparation of the report to the Parliamentary Secretary.

The Commission wishes to clarify that Tindo requested an extension to the 20 day period to provide a submission to the Commissioner in response to the SEF. The Commissioner granted an extension of one week to Tindo.

In its submissions dated 29 June 2015; and 7,13,15,17 July 2015, Trina Solar submitted that:

- (i) the Commission ought to publish a revised SEF if the case is not terminated by 6 October 2015, allowing 20 days for the interested parties to make further submissions;
- (ii) a particular market situation can only be concluded in China if the GOC policies relating to costs and prices of PV modules or panels do not permit a proper comparison of export prices to Australia and domestic prices of like goods;
- (iii) policies that may reduce costs and prices of PV modules produced by Chinese exporters and sold in domestic and export markets may provide grounds for subsidy investigation but not grounds for a particular market situation finding in a dumping investigation; and that the Australian industry has heavy reliance on the Canada Border Service Agency's preliminary report, which may change during the course of CBSA's investigation.

The Commission's consideration of the issues raised by Trina Solar is discussed below:

- (i) Having found that a particular market situation exists in the PV modules or panels market in China (as discussed in section 6.3 of this report), the Commission re-calculated normal value in accordance with s.269 TAC2(c) and revised the dumping margins as discussed in 6.4.1 of this report. The Commission found that the revised dumping margin is causing negligible injury to the Australian industry. Therefore, the Commissioner terminated the investigation.

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- (ii) In relation to items (ii) and (iii) - as detailed in section 6.3 of this report, the Commission used various sources of information when assessing if a particular market situation exists in the PV modules or panels industry in China. The Commission also noted that on 18 June 2015, the CBSA affirmed its preliminary findings regarding the GOC's influence in the PV modules and laminates market. The Commission's detailed analysis is at **Non Confidential Appendix 2** of this report.

In its submissions dated 5,13,31 August 2015; and 4,16,21,28 September 2015 Trina Solar submitted that:

- (i) the Commission has not published the terms of reference that were provided to Dr George Barker of LECA. Dr Barker in his report referred to the *terms of reference* as a 'brief' but no further details were provided in that report. Trina Solar stated that this information is relevant to the defence of Trina Solar's interests in a particular market situation investigation;
- (ii) the Commission has provided no reasons why the cost of PV cells in Trina Solar's records regarding its production costs of PV modules or panels do not reasonably reflect 'competitive market costs'. Trina Solar provided BNEF international prices for polysilicon during the investigation period comparing it to the Chinese prices in the BNEF data. Trina Solar stated the Chinese prices are comparable to the international prices and therefore cells produced by Trina Solar and used in the production of PV modules or panels reflected market competitive costs;
- (iii) Tindo provided no new evidence to make the Commission revise its findings regarding any injury caused by the dumping of the goods exported from China and any factors that affected Tindo's performance. Trina Solar highlighted the factors discussed in the SEF as the reasons why dumping has caused negligible injury to the Australian industry.

The Commission's consideration of the issues raised by Trina Solar's is discussed below:

- (i) the terms of reference provided to Dr Barker of LECA were in accordance with standard government practices for the procurement of such consultancy services. A copy of the LECA's terms of reference is at **Non-Confidential Appendix 1**;
- (ii) having found that a particular market situation exists in the PV modules or panels market in China, the Commission re-calculated normal value and dumping margin as discussed in section 6.4.1 of this report. The Commission provided the revised calculations and methodology to each of the four selected exporters separately to seek their comments regarding the calculations. However, Trina solar made a submission regarding the Commission's market situation findings and objected the adjustment of self-produced PV cells.<sup>30</sup> From the polysilicon purchase data provided by Trina Solar, the Commission noted Trina Solar purchased polysilicon from

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<sup>30</sup> The Commission did not publish Trina Solar's non-confidential submission dated 31 August 2015 since the Commission's findings regarding a particular market situation and benchmark report were not published at that time.



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unrelated domestic suppliers and also imported some polysilicon to manufacture wafers which in turn was used to manufacture PV cells used in the production of the PV modules or panels. The Commission compared BNEF prices with domestic prices of polysilicon and noted that domestic purchases of polysilicon were approximately 22 percent lower than the BNEF prices in the investigation period.

The Commission is aware that while Trina Solar produced its own wafers, it also purchased some wafers from unrelated domestic suppliers and imported some.

The Commission was therefore not able to distinguish what proportion of imported polysilicon and/or wafers was used in the production of PV modules or panels exported to Australia. Therefore, the Commission adjusted all cost of PV cells to the BNEF benchmark price as discussed in section 6.4.1 of this report. The assessment of 'competitive market costs' of self-produced cells and domestically purchased cells is also discussed in the market situation report (**Non-Confidential Appendix 2** refers); and (iii) matters relevant to injury and causation are discussed in Chapter 8 of this report.

### 6.4.4 Renesola

Renesola Jiangsu is wholly owned by ReneSola Zhejiang. ReneSola Jiangsu manufactures the PV modules or panels which are sold on the domestic and export markets by ReneSola Jiangsu and ReneSola Zhejiang. ReneSola Zhejiang and ReneSola Jiangsu are together referred to as Renesola for the purpose of this report.

The Commission found that inter-company transaction between these entities were non-arms length and therefore collapsed them all together for the purpose of analysis and the calculation of a dumping margin. Further information concerning these entities can be found in the exporter visit report on the public record.

#### Export price

The Commission considers that, in respect of export sales to Australia by Renesola during the investigation period:

- the PV modules or panels have been exported to Australia otherwise than by the importer;
- the PV modules or panels have been purchased by the importer from the exporter; and
- the purchases of the PV modules or panels by the importer were arms length transactions.

The export price has been established in accordance with s.269TAB(1)(a) of the Act, as the price paid by the importer less transport and other costs arising after exportation.

### Normal value

Having made the findings outlined in section 6.3 of this report, the Commission has therefore constructed normal values under s.269TAC(2)(c) of the Act.

In the construction, the Commission has adjusted the cost of the major raw material (PV cells) using the BNEF as an appropriate benchmark price for the mono-crystalline cells and for the poly-crystalline cells.

The costs of cells that were either self-manufactured or purchased domestically by Renesola were also adjusted<sup>31</sup>. In the periods (months) where the Commission found that the weighted average cost of cells were:

- higher than the benchmark prices, downward adjustments were made;
- lower than the benchmark price, upward adjustments were made; and
- the Commission noted that some PV modules or panels were purchased from unrelated Chinese manufacturers and exported to Australia. For those PV modules or panels, the Commission calculated Renesola's proportion of the cost of cells to the total CTM in the investigation and used that proportion to calculate the cost of cells of those PV modules or panels. In the absence of any other information, the Commission considers this is a reasonable approach to calculate the cost of cells for those PV modules or panels. The Commission then adjusted the cost of cells for those PV cells using the same methodology as discussed above.

An OCOT profit was added to the total revised CTMS. The Commission made adjustments for export inland freight, in accordance with s.269TAC(8) of the Act, to ensure a fair comparison of normal values with export prices.

### Dumping margin

The dumping margin for Renesola was established in accordance with s.269TACB(2)(a) of the Act, 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.

The dumping margin for Renesola is 16.1 per cent.

#### **6.4.5 Renesola submission - Post SEF**

In the SEF the Commission revised its methodology to calculate normal value of the '*DS model*' mono-crystalline PV modules by adjusting the selling price of poly-crystalline PV modules using the quarterly CTMS difference, as a percentage, between poly-crystalline and mono-crystalline PV modules. As a result of this revision, Renesola's dumping margin increased from -0.3 per cent to 2.1 per cent.

In its submission dated 27 April 2015, Renesola requested the Commission to review its methodology. Renesola claims that the Commission's approach does not comply with

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<sup>31</sup> Exporter visit report page 13 refers.

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s.269TAC of the Act. Renesola also stated that in its view, combining the mono-crystalline and poly-crystalline PV modules or panels on the basis that they are 'like goods' is inconsistent with the Commission's current policy and practices as published in the *Dumping and Subsidy Manual*.<sup>32</sup> Renesola stated that while the models can be deemed as 'like goods' for the purpose of determining 'the goods' under consideration, mono-crystalline and poly-crystalline PV modules or panels are significantly different in costs, pricing and marketing. Renesola stated that the only methodology that will provide a 'fair' comparison between domestic and export sales of *DS Model* mono-crystalline PV modules is to be ascertained under s.269TAC(2)(c) of the Act.

The Commission has considered the issues raised by Renesola in its submission. Having established that a particular market situation exists in the PV modules or panels market such that the domestic sales are not suitable for establishing normal values under s.269TAC(1) of the Act, the Commission re-calculated normal values for all models of poly-crystalline and mono-crystalline (including DS model) PV modules or panels in accordance with s.269TAC(2)(c) of the Act as discussed in section 6.4.4 of this report.

### 6.4.6 Australian Industry's submission PRE SEF

In a submission<sup>33</sup> to the Commission following the publication of Renesola's verification visit report<sup>34</sup> the Australian industry claims that:

- (i) the Commission has erred in its calculation of the dumping margin by not taking into account the intercompany relationships of Renesola's business structure and possible manipulation of inter-company prices for inputs; and
- (ii) in its recent findings, the US Department of Commerce (USDOC) found 'errors' in the calculation by Renesola of 'labour hours' used in the production of PV modules or panels and as such the USDOC did not use Renesola's reported 'labour factor of production' in its calculations.

The Commission has considered the issues raised by Renesola in its submission as discussed below:

- (i) In relation to the inter-company transactions between members of the Renesola group, the Commission is satisfied that it has appropriately tested and accounted for relevant transactions. While the detail of Renesola's costs is confidential, the Commission is satisfied based on its verification that there has been no manipulation of the cost of inputs to the manufacture of PV modules or panels by Renesola.

The visit report sets out the Commission's verification of Renesola's labour costs as reported in its Exporter Questionnaire response. The Commission is satisfied that the labour costs are a complete and accurate reflection of the labour costs recorded in Renesola's financial records, which have been audited.

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<sup>32</sup> <http://www.adcommission.gov.au/accessadsystem/Pages/Dumping-and-Subsidy-Manual.aspx>

<sup>33</sup> Public Record version of Tindo's submission dated 23 March 2015.

<sup>34</sup> Renesola's verification visit report was published on the Commission's website on 11 February 2015.

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- (ii) In its submission the Australian Industry also referred to the dumping margins found by other administrations. The Commission considers that the dumping margins found by the US and the European Commission, and the preliminary findings by Canada, cannot be directly compared with the Commission's findings. This is due to significant differences between the approaches taken by those administrations compared to Australia when assessing dumping margins for exports from China.

### 6.4.7 ET Solar

ET Solar Industry Limited (TT) is the manufacturer of the goods and sells the goods in the domestic market through a related trading entity ET Energy Co., Limited (NY). All exports to Australia were through another related entity ET Solar Energy Limited (EN). TT, NY and EN are together referred to as ET Solar for the purpose of this report.

The Commission found that inter-company transaction between these entities were non-arms length and therefore collapsed them all together for the purpose of analysis and the calculation of a dumping margin. Further information concerning these entities can be found in the exporter visit report on the public record.

#### Export price

The Commission considers that, in respect of export sales to Australia during the investigation period:

- the PV modules or panels have been exported to Australia otherwise than by the importer; and
- the goods have not been purchased by the importer from the exporter.

The export price has been established in accordance with s. 269TAB(1)(c) of the Act, being the price that the Minister determines having regard to all the circumstances of the exportation. The Commission used the invoice price at which the goods were sold by EN to unrelated customers less prescribed deductions.

#### Normal value

Having made the findings outlined in section 6.3 of this report, the Commission has therefore constructed normal values under s.269TAC(2)(c) of the Act.

In the construction, the Commission has adjusted the cost of the major raw material (PV cells) using the Bloomberg New Energy Finance (BNEF) as an appropriate benchmark price for the mono-crystalline cells and for the poly-crystalline cells.

The costs of cells that were either self-manufactured or purchased domestically by TT were also adjusted. In the periods (months) were the Commission found that the weighted average cost of cells were:

- higher than the benchmark prices, downward adjustments were made; and
- lower than the benchmark price, upward adjustments were made.

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No adjustment was made to the cost of cells that were imported and were used in the production of PV modules or panels that were exported to Australia.

An OCOT profit was added to the total revised CTMS. The Commission made adjustments for export inland freight, in accordance with s.269TAC(8) of the Act, to ensure a fair comparison of normal values with export prices.

### Dumping margin

The dumping margin for ET Solar was established in accordance with s.269TACB(2)(a) of the Act, 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.

The dumping margin for ET Solar is 19.8 per cent.

### **6.4.8 ET Solar's submission - Pre SEF**

In a submission<sup>35</sup> to the Commission following publication of its verification visit report<sup>36</sup> ET Solar claims that:

- (i) SG&A data provided to the Commission at the time of the visit for TT and NY included inland transportation and value added tax (VAT), therefore SG&A adjustments made by the Commission need to be revised using the revised data provided with the submission;
- (ii) the normal value calculated for TT should not include EN's SG&A expenses;
- (iii) ocean freight and inland transport costs listed in the Australian sales data provided to the Commission during the visit includes VAT, therefore the Commission's export price needs to be revised using the revised data (excluding VAT) provided with the submission; and
- (iv) for the normal value calculation for poly-crystalline PV modules or panels, the CTMS should deduct the weighted average inland freight (per watt, excluding VAT) of the domestic sales on delivered terms first, and then add inland delivery (excluding VAT) to the FOB point.

The Commission has considered the issues raised by ET Solar in its submission as discussed below.

In relation to items (i) and (iii) above, ET Solar did not provide any evidence to support its claims for these amendments. The Commission has therefore not accepted these claims.

In relation to items (ii) and (iv) above:

- EN's SG&A expenses have not been included in the calculation of normal value for TT. A small adjustment was made to make TT's domestic sales comparable to export sales given that all exports were through a related entity, EN; and
- as discussed above, the methodology used to calculate the normal value for the poly-crystalline PV modules or panels as set out in the visit report has been

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<sup>35</sup> Public Record version of the ET Solar's submission dated 10 March 2015.

<sup>36</sup> ET Solar's verification visit report was published on the Commission's website on 3 March 2015.

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revised by the case management team. In addition, no further evidence was provided that the inland freight included VAT therefore no further adjustment has been made.

### 6.4.9 ET Solar's submission - Post SEF

Following the publication of the SEF, in its submission dated 7 April 2015, ET Solar submitted that evidence regarding inclusion of VAT in the ocean freight and inland freight were provided to the exporter visit team during the verification visit and asked the Commission to make reasonable adjustments to the export price and normal value.

The Commission's consideration of ET Solar's submission is discussed below:

- (i) *Export Price* - The Commission noted that VAT was included in the ocean freight and inland freight. The Commission also noted that evidence was provided and verified by the visit team. Therefore, the Commission re-calculated FOB export price using the ocean freight excluding VAT.
- (ii) *Normal Value* - Having established that a particular market situation exists in the PV modules or panels market such that the domestic sales are not suitable for establishing normal values under s.269TAC(1) of the Act, the Commission re-calculated normal values for all models of poly-crystalline and mono-crystalline PV modules or panels in accordance with s.269TAC(2)(c) of the Act as discussed in section 6.4.7 of this report.

### 6.4.10 Wuxi Suntech Power Co., Ltd (Wuxi Suntech)

#### Export price

The Commission considers that in respect of export sales to Australia during the investigation period to unrelated Australian customers:

- the goods have been exported to Australia otherwise than by the importer;
- the goods have been purchased by the importer from the exporter; and
- purchases of the goods by the importer were arms length transactions.

The export price for these sales has been established in accordance with s. 269TAB(1)(a) of the Act, as the price paid by the importer less transport and other costs arising after exportation.

The Commission considers that in respect of export sales to Australia during the investigation period to Suntech Power Australia Pty Ltd (Suntech Australia):

- the goods have been exported to Australia otherwise than by the importer;
- the goods have been purchased by the importer from the exporter; and
- purchases of the goods by the importer were not arms length transactions; and
- the goods were subsequently sold by the importer in the condition in which they were imported to a person who is not an associate of the importer.

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The export price for those sales has been established in accordance with s. 269TAB(1)(b) of the Act, being the price at which the goods were sold by the importer less the prescribed deductions.

### Normal value

Having made the findings outlined in section 6.3 of this report, the Commission has therefore constructed normal values under s.269TAC(2)(c) of the Act.

In the construction, the Commission has adjusted the cost of the major raw material (PV cells) using the BNEF as an appropriate benchmark price for the mono-crystalline cells and for the poly-crystalline cells.

The costs of cells that were either self-manufactured or purchased domestically by Wuxi Suntech were also adjusted. In the periods (months) where the Commission found that the weighted average cost of cells were:

- higher than the benchmark prices, downward adjustments were made; and
- lower than the benchmark price, upward adjustments were made.

No adjustment was made to the cost of cells that were imported and were used in the production of PV modules or panels that were exported to Australia.

An OCOT profit was added to the total revised CTMS. The Commission made adjustments for export inland freight, in accordance with s.269TAC(8) of the Act, to ensure a fair comparison of normal values with export prices.

### Dumping margin

The dumping margin for Suntech was established in accordance with s. 269TACB(2)(a) of the Act, 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.

The dumping margin for Suntech is 38.8 per cent.

#### **6.4.11 Wuxi Suntech's submission – Pre SEF**

In a submission<sup>37</sup> to the Commission following publication of its verification visit report<sup>38</sup> Wuxi Suntech claims that:

- (i) the normal value for the mono-crystalline PV modules or panels should be constructed;
- (ii) Suntech Australia was not an importer and did not bear any importation cost during the investigation period, therefore when calculating the deductive export price no importation cost should be deducted;
- (iii) the deduction of an average SG&A amount is incorrect; and

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<sup>37</sup> Public Record version of the Wuxi Suntech's submission was published on the Commission's website on 26 March 2015.

<sup>38</sup> Wuxi Suntech's verification visit report was published on the Commission's website on 4 March 2015.

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- (iv) since Suntech Australia was not an importer during the investigation period, no profit should be deducted.

The Commission has considered the issues raised by Wuxi Suntech in its submission as discussed below:

(i) *normal value for the mono-crystalline PV modules or panels*

Wuxi Suntech claims that the normal value for the mono-crystalline PV modules or panels should be established in accordance with s.269TAC(2)(c) of the Act for the following reasons:

- the majority of the mono-crystalline PV modules or panels were sold at a loss and were not in the OCOT;
- the normal value for mono-crystalline PV modules or panels was based on the remaining (very small proportion) sales that were not representative of the domestic sales or the domestic market prices. These sales also had very high profits; and
- the Act does not prescribe when the Commission might disregard domestic sales and construct normal value if the volume of sales in OCOT exceeds the 5 per cent sufficiency threshold. However, the *Dumping and Subsidy Manual* provides an example of a situation where it is acceptable to calculate normal value using constructed costs even when there is a sufficient volume of sales in the OCOT.

For Wuxi Suntech, the Commission found that there was a sufficient volume of mono-crystalline PV modules or panels sold in the ordinary course of trade in the Chinese domestic market. Therefore, the Commission established the normal value of mono-crystalline PV modules or panels in accordance with s.269TAC(1)(a) of the Act as discussed in s.269TAC(2)(c) of this report.

The Commission considers that the reason provided by Wuxi Suntech does not warrant the normal value of the mono-crystalline PV modules or panels to be established under a different methodology.

(ii) *Other issues*

For export sales made directly to unrelated customers by Wuxi Suntech, the Commission considered those sales to be arms length and calculated the export price under s. 269TAB(1)(a).

The other issues in the submission are related to Suntech Australia being regarded as an importer during the investigation period. The Commission considered the additional confidential information provided by Wuxi Suntech and Suntech Australia.

Based on its assessment of that information, the Commission considers that Suntech Australia is the importer of the goods during the investigation period and that the export sales between Wuxi Suntech and Suntech Australia are not at arms length.



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The Commission calculated the export price from the sales made by Suntech Australia to unrelated customers under s. 269TAB(1)(b) (deducting an amount for importation costs, SG&A and profit, explained below).

### *Importation costs*

From the selected documents examined by the Commission, importation costs were paid by Suntech Australia for some of the imports. For others, Suntech Australia claimed that the importation costs were paid by its customers, but provided no evidence to support that claim. Therefore, based on the evidence provided, the Commission considers that the importation costs have been paid by Suntech Australia and were deducted when calculating the export price under s.269TAB(1)(b) of the Act.

### *SG&A expenses*

Wuxi Suntech and Suntech Australia suggest that SG&A expenses should be calculated using Suntech Australia's financial report for the FY2013 for the sales of PV modules or panels and using the quantity (watts) exported by Wuxi Suntech.

The Commission considers that it is not reasonable to use the total export volume (watts) of Wuxi Suntech in order to calculate the SG&A expense associated with Suntech Australia's sales of PV modules or panels in the Australian market. The revenue derived by Suntech Australia from its activities that relate to other export sales of Wuxi Suntech has been included in the denominator used by the Commission to calculate the SG&A ratio. The Commission considers that the SG&A has therefore been appropriately apportioned over all Suntech Australia's revenue-generating activities, including those not associated with its own sales in Australia.

### *Profit*

Since the Commission considers Suntech Australia to be the importer of the goods, a profit (using the average profit of three importers that are unrelated to their supplier) was deducted to calculate the export price in accordance with s.269TAB(1)(b) of the Act.

## **6.5 Determination of dumping margins for residual exporters**

### Export price

The export price for the residual exporters has been established in accordance with s.269TAB(3) of the Act, being the price that the Minister determines having regard to all relevant information. The Commission used the weighted average export price of the four selected exporters.<sup>39</sup>

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<sup>39</sup> In accordance with s.269TACAB(2)(c).

Normal value

The normal values for mono-crystalline and poly-crystalline PV modules or panels were established in accordance with s. 269TAC(6) of the Act, being the normal value that the Minister determines having regard to all relevant information. The Commission used weighted average normal value of the four selected exporters.<sup>40</sup>

Dumping margin

The dumping margin for residual exporters has been determined as a comparison between the weighted average of export prices with the corresponding weighted average normal values in accordance with s. 269TACB(2)(a) of the Act.

The dumping margin for residual exporters is 21.1 per cent.

**6.6 Volume of dumped exports**

Pursuant to s.269TDA(3) of the Act, the Commissioner must terminate the investigation, in so far as it relates to the country, if he is satisfied that the total volume of goods that are dumped is a negligible volume. Section 269TDA(4) defines a negligible volume as less than three per cent of the total volume of goods imported into Australia over the investigation period.

As outlined in earlier in this report, the Commission estimated the size of the Australian market.

Based on this information, the Commission is satisfied that, when expressed as a percentage of the total imported volume of the goods, the volume of dumped goods from China was greater than three per cent of the total import volume and is therefore not negligible.

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<sup>40</sup> In accordance with s.269TACAB(2)(d).

## 7 ECONOMIC CONDITION OF THE INDUSTRY

### 7.1 Findings

The Commission usually conducts its injury analysis by examining the economic condition of the industry over at least a three year period. As Tindo commenced operating in July 2012, the Commission established an injury analysis period from January 2010 to December 2013. This period enabled the Commission to examine import volumes before and after Tindo's entry into the market, and to analyse Tindo's sales and cost data over the entire period of its existence that fell within the investigation period (i.e. July 2012 to December 2013).

In its application Tindo had characterised the injury it had suffered as being the gap between its actual performance and the performance it had anticipated in its business plan. Tindo's business plan is discussed in greater detail at sections 8.5.3 and 8.5.4 of this report. A copy of Tindo's business plan is at **Confidential Appendix 6**.

Having regard to the information contained in the application and verified by the Commission, the Commissioner considers that the Australian industry's performance during the investigation period has been as follows:

- (i) overall sales volume increased over the 18 month investigation period, except for the wholesale market as discussed in section 7.5.1;
- (ii) after a sharp decline in price between the first and second quarters of the investigation period, there were only slight falls in prices in other periods;
- (iii) prices had been suppressed throughout the investigation period. However, in the last two quarters unit costs had decreased sharply due to increased production volumes, reducing the gap between costs and revenue (Figure 8 refers); and
- (iv) while there were losses overall, these had been smallest during the last quarter of the investigation period.

### 7.2 Approach to injury analysis

The injury analysis detailed in this section is based on the financial information submitted by Tindo in its application, and data from the ABF import database for the period 1 January 2010 to 31 December 2013. Tindo provided production, cost and sales data for PV modules or panels on a quarterly basis for the period 1 July 2012 to 31 December 2013.

#### 7.2.1 Cost data

As discussed in section 6.5 of the Australian industry visit report, the Commission found that Tindo's CTMS data was a reasonably complete, relevant and accurate reflection of the actual costs to manufacture and sell PV modules or panels during the period 1 July 2012 to 31 December 2013. Although Tindo's sales commenced from July 2012, it incurred the majority of its establishment costs in periods prior to its commencement. The Commission is satisfied that the CTMS data for the investigation period is not adversely affected by the inclusion of start-up costs.

Accordingly the Commission found that Tindo's CTMS data was suitable for analysing the economic performance of its PV modules or panels operations from 1 July 2012 to 31 December 2013.

### **7.2.2 Sales data**

The Commission considered that Tindo's sales data, as provided as part of its application and verified by the Commission, was a reasonably complete, relevant and accurate reflection of the sales of PV modules or panels during the period 1 July 2012 to 31 December 2013.

Accordingly, the Commission found that Tindo's sales data was suitable for analysing the economic performance of its PV modules or panels operations from 1 July 2012 to 31 December 2013.

## **7.3 Legislative framework**

Under section 269TG of the Act, one of the matters that the Minister must be satisfied of in order to publish a dumping duty notice is that, because of the dumping, material injury to an Australian industry has been, or is being, caused or is threatened, or the establishment of an Australian industry has been or may be materially hindered.

## **7.4 Commencement of injury, and analysis period**

Tindo alleges that material injury caused by dumped imports of PV modules or panels from China commenced from when it entered the market in July 2012.

Tindo submitted that the sale of like goods produced by the Australian industry has remained unprofitable since its establishment. Furthermore Tindo submitted that it sold the goods below the cost of production to enter the market that was predominantly supplied by China.

As specified in CON 239, the Commission has set the investigation period as 1 July 2012 to 31 December 2013, and the period for assessing the condition of the Australian industry from 1 January 2010 to 31 December 2013.

## **7.5 Volume trends**

### **7.5.1 Sales Volume**

Tindo has not claimed injury from loss of sales volume. The data provided shows that its overall sales have grown since its establishment in July 2012. However, Tindo stated that its sales to wholesalers have declined in the investigation period. As a result of this decline Tindo submits that it was forced to change its business strategy to start marketing and supplying directly to residential and commercial customers. During the investigation period around 20 per cent (by volume) of Tindo's total sales of PV modules or panels were to wholesalers.

Tindo provided sales data for its top 20 wholesale customers during the investigation period. The Commission compared Tindo's total sales and wholesale volumes (units) as shown in Figure 5 below.

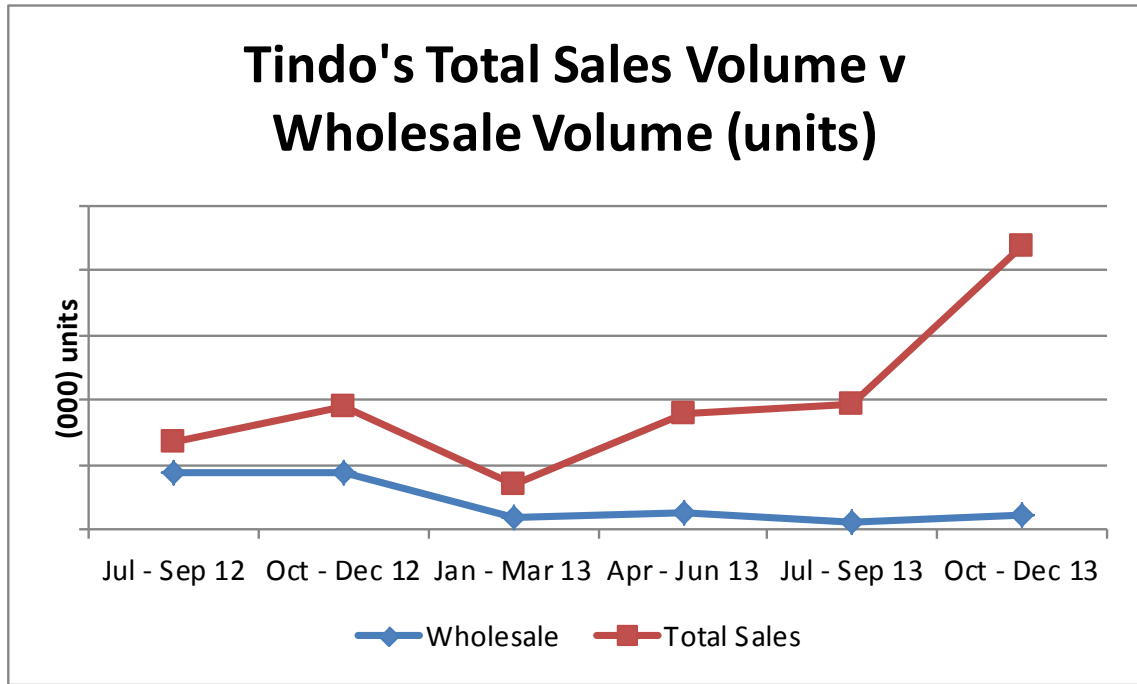


Figure 5 – Tindo’s total sales v wholesale sales (units) of PV modules or panels

From Figure 5 above, it is evident that while Tindo’s overall sales volume grew, its sales volume of PV modules or panels to wholesalers has declined in the investigation period.

**7.5.2 Market Share**

The following graph illustrates the Australian market shares using data submitted by Tindo (from 1 July 2012 to 31 December 2013) and the ABF import database (from 1 January 2010 to 31 December 2013).

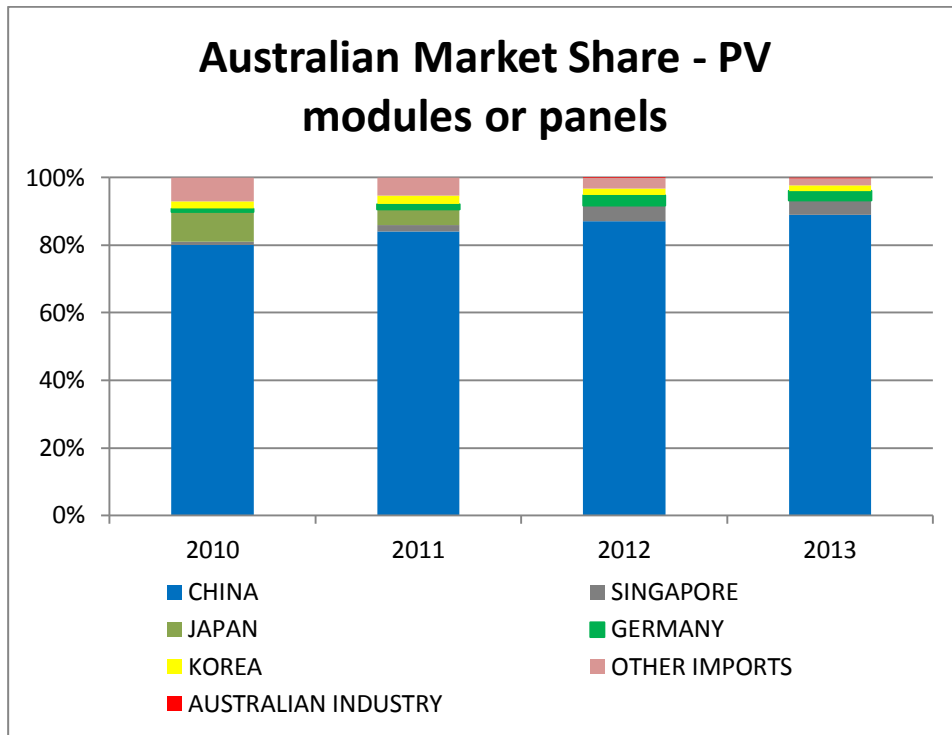


Figure 6 – Australian market share

Figure 6 illustrates that imports from China dominate the PV modules or panels market in Australia. Tindo’s market share remains low (less than 1 per cent) compared to the imported goods during the investigation period.

### 7.5.3 Conclusion – volume effects

Based on the information gathered during the investigation period, the Commission found that Tindo has not lost sales volume overall but has lost sales in the wholesale segment of the market.

## 7.6 Price effects

### 7.6.1 Price depression and price suppression

Price depression occurs when a company, for some reason, lowers its prices. Price suppression occurs when price increases, which otherwise would have occurred, have been prevented. An indicator of price suppression may be the margin between revenues and costs.

Price suppression occurs when price increases, which otherwise would have occurred, have been prevented. An indicator of price suppression may be the margin between revenues and costs.

Based on the data submitted by Tindo and verified by the Commission, total revenue was below total costs, and unit revenue below unit cost, for the entire 18 month period ending 31 December 2013, as illustrated in Figures 7 and 8 below.

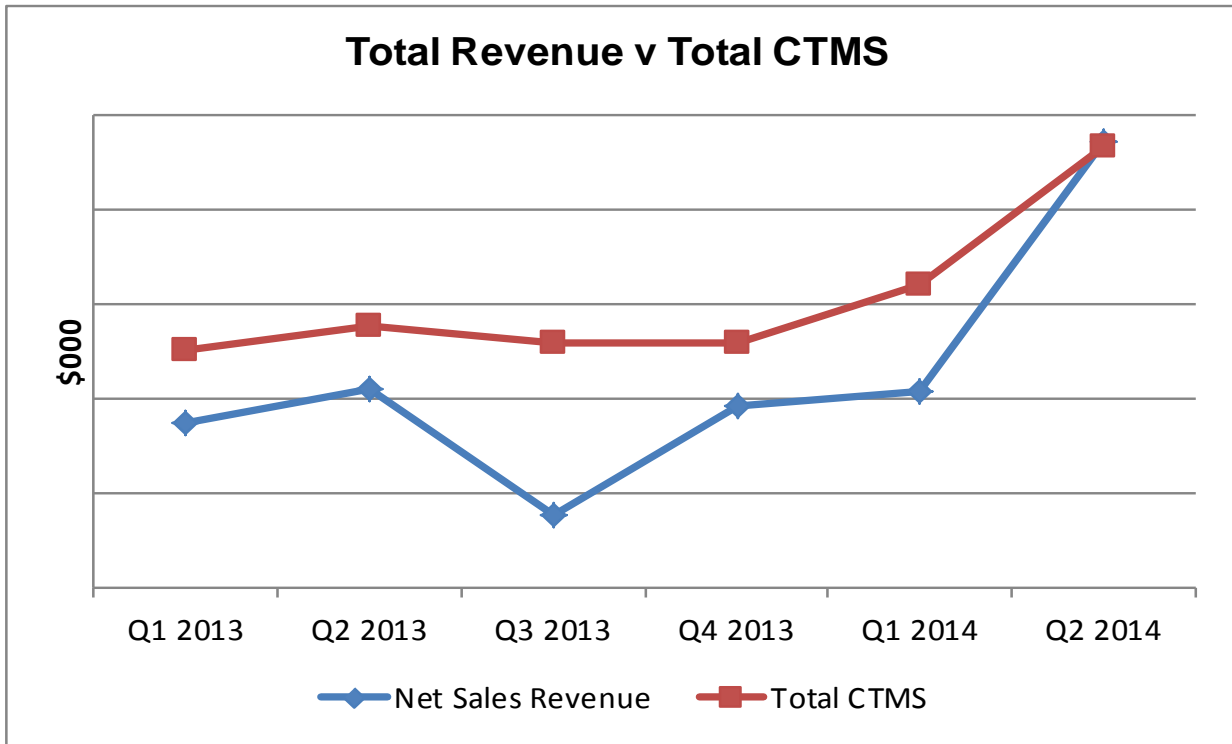


Figure 7 – Tindo’s Total Sales v Total CTMS of PV modules

On a quarterly basis, Figure 7 shows that while total costs remained higher than the total revenue for the entire 18 months to 31 December 2013, in the last quarter Tindo almost broke even.

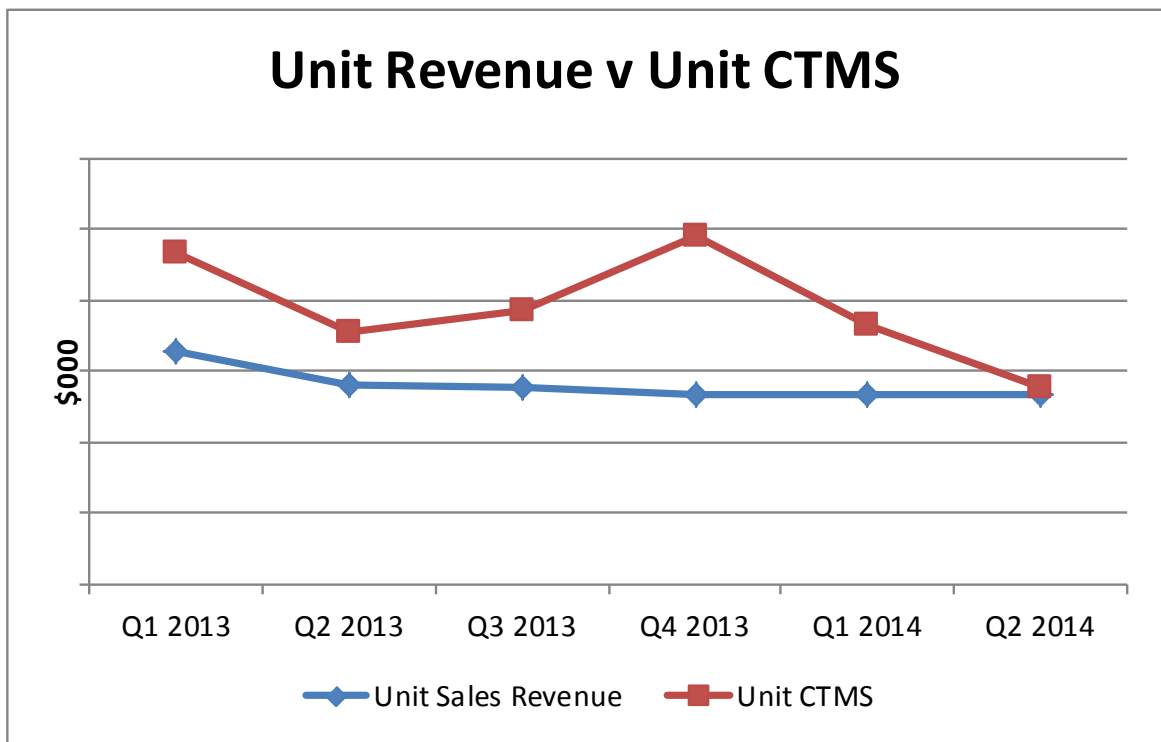


Figure 8 – Tindo’s unit sales revenue v unit CTMS of PV modules

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Figure 8 demonstrates that Tindo was not able to increase its unit prices above the unit CTMS in the 18 month period ending 31 December 2013. In relation to some commercial projects, Tindo provided evidence from bids that were ultimately successful that it had revised its original quotations downwards by up to 25 per cent in order to compete with PV modules or panels exported from China at allegedly dumped prices.

### 7.6.2 Conclusion – price effects

The Commission found that Tindo has suffered from price depression and suppression during the investigation period, although its situation was improving toward the end of the investigation period.

## 7.7 Profit and profitability effects

Based on data submitted by the Australian industry and verified by the Commission, the Commission calculated the total profit and profitability for the entire 18 month period ending 31 December 2013. The Commission also calculated profit and profitability of the Australian industry on a quarterly basis.

The Australian industry suffered losses throughout the investigation period, but these losses had been at their smallest during the final quarter, as shown in Figure 9 below.

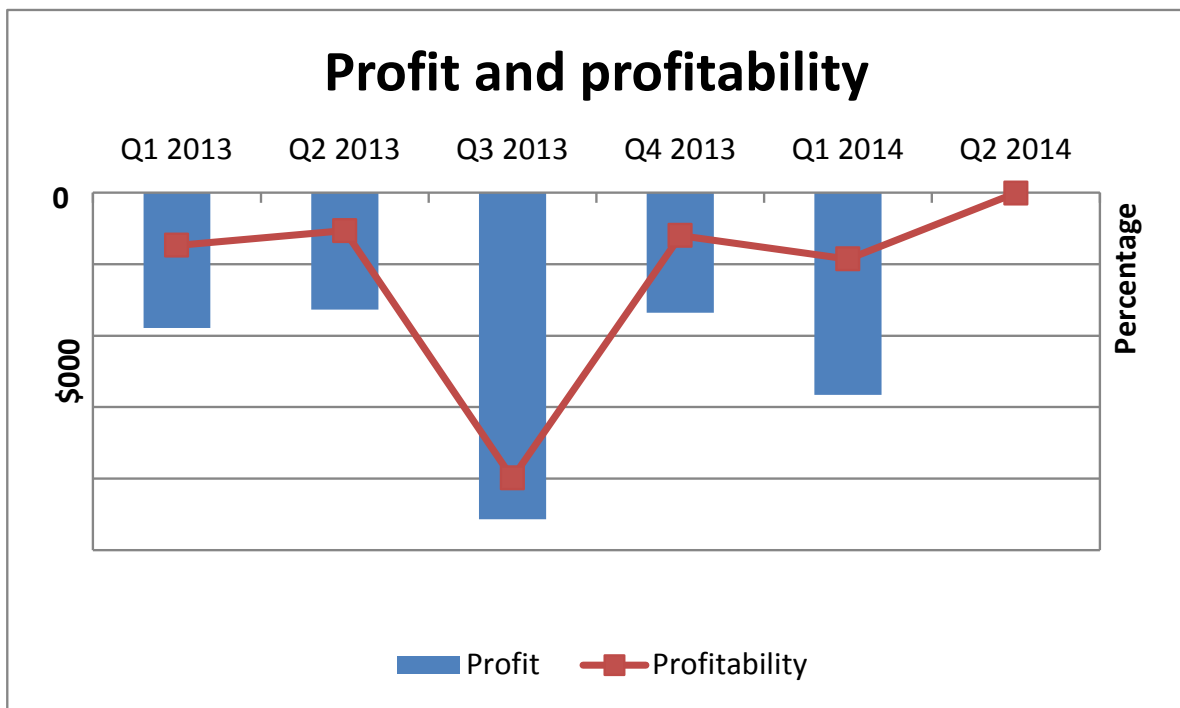


Figure 9 – Tindo's profit and profitability

### 7.7.1 Conclusion – profit and profitability effects

Tindo suffered injury in the form of losses and negative profitability.



## **7.8 Other economic factors**

Given that Tindo has only been in operation since 1 July 2012, the data provided in Appendix A7 regarding other economic factors cannot be meaningfully relied upon to identify other injury trends. However from the quarterly data submitted, the following observations were made:

### Revenue

Revenue from the sale of PV modules or panels increased overall since Tindo's establishment in July 2012.

### Capacity utilisation

Tindo's capacity utilisation was below its full capacity at the end of the investigation period.

### Employment

Employment numbers increased by approximately 70 per cent during the investigation period.

### Stocks

Stock levels at the end of each quarter have increased.

## **7.9 Conclusion**

Based on the verified and unverified information gathered during the course of the investigation, the Commission considers that the Australian industry's performance has been as follows:

- (i) overall sales volume increased over the 18 month investigation period, except for the wholesale market;
- (ii) after a sharp decline in price between the first and second quarters of the investigation period, there were only slight falls in prices in other periods;
- (iii) prices had been suppressed throughout the investigation period. However, in the last two quarters unit costs had decreased sharply due to increased production volumes, reducing the gap between costs and revenue; and
- (iv) while there were losses overall, these had been smallest during the last quarter of the investigation period.

## 8 HAS DUMPING CAUSED MATERIAL INJURY OR HINDRANCE TO THE ESTABLISHMENT OF AN INDUSTRY?

### 8.1 Findings

Having considered all relevant information and submissions following the publication of the SEF, the Commissioner has found that the injury, if any, to Tindo, or the hindrance, if any, to the establishment of an Australian industry, caused by the dumping of goods exported from China is negligible.

The Commission considers that Tindo's performance has been adversely affected by:

- the timing of its entry to the PV modules or panels market, which occurred when the market had reached its peak and was in decline;
- the availability of exports from China at prices significantly below Tindo's cost of production; and
- the price sensitivity and preference of the market for cheaper, DC models of PV modules or panels which represented only a small proportion of Tindo's offer to the market.

The Commission has observed that the volume of sales that Tindo lost in the wholesale market (section 7.5 of this report refers) represented a declining proportion of Tindo's total sales volume. The Commission's view is that these lost sales were due to the preference of end users for the lower priced DC models.

Further, the Commission has observed that the degree to which Tindo's prices are higher than the imported products significantly exceed the dumping margins which have been calculated. Even if the imported products were not dumped, the Commission's view is that the significant remaining price differential would not have resulted in a shift towards Tindo's products during the investigation period.

The Commissioner has therefore determined that in these circumstances the dumping of PV modules or panels is causing negligible injury to Tindo, and is not hindering the establishment of the Australian industry. Furthermore, the application of a dumping duty would have little remedial effect on the specific forms of injury being suffered by Tindo.

### 8.2 Background

Section 269TAE of the Act outlines the factors that the Parliamentary Secretary may take into account in determining whether material injury to an Australian industry has been or is being caused or is threatened, or would or might have been caused, or whether the establishment of an Australian industry has been materially hindered, because of any circumstances in relation to the exportation of goods to Australia from the country of export.

Article 3.5 of the *WTO Anti-Dumping Agreement* requires that the 'authorities shall also examine any known factors other than the dumped imports which at the same time are injuring the domestic industry, and the injuries caused by these other factors, must not be attributed to the dumped imports'. It requires the Commission to appropriately assess the injurious effects of those other factors", a step which involves "separating and

distinguishing the injurious effects of the other factors from the injurious effects of the dumped imports.” The Dumping manual also sets out these requirements in the chapter titled ‘Causation’.

Tindo commenced manufacturing in mid-2012. The investigation period for this case is from 1 July 2012 to 31 December 2013, representing the first 18 months of Tindo’s operation. In assessing the impact of dumped exports on Tindo’s business the Commission has examined not only whether dumped exports have caused material injury or threatened to cause material injury, but also whether the establishment of an Australian industry has been materially hindered by the export of dumped goods.

### **8.3 Size of the dumping margins**

Section 269TAE(1)(aa) of the Act states that, in determining whether material injury to the Australian industry has been caused by dumping for the purposes of s.269TG of the Act, the Parliamentary Secretary may have regard to the size of the dumping margin, or of each of the dumping margins, worked out in respect of goods of that kind that have been exported to Australia and dumped.

The dumping margins outlined in Chapter 6 of this report range between 16.1 and 38.8 per cent. The highest margin relates to one small volume exporter only; as a result, the weighted average dumping margin is 21.1 per cent.

### **8.4 Price effects**

Section 269TAE(1)(e) of the Act states that the Parliamentary Secretary may have regard to the difference between:

- (i) the price that has been or is likely to be paid for goods of that kind, or like goods, produced or manufactured in the Australian industry and sold in Australia; and
- (ii) the price that has been or is likely to be paid for goods of that kind exported to Australia from the country of export and sold in Australia.

#### **8.4.1 Tindo’s claims**

During the verification visit, Tindo submitted that substantial price injury, in the form of price depression and suppression, has been suffered due to consistent downward pressure on its prices caused by imported Chinese PV modules or panels.

Tindo submitted that it constantly monitors the price offerings and issued price lists of its competitors supplying imported PV modules or panels from China and responds to those prices by reducing its own price offers to compete with those Chinese suppliers.

Tindo provided evidence of particular commercial sales that it had obtained by reducing its initial quoted price in order to compete with import price offers.

#### **8.4.2 Pricing Analysis**

The Commission has undertaken an analysis of the price differentiation claims by Tindo. The analysis is based on verified sales data from both importers and Tindo.

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The Commission encountered some limitations when conducting the analysis. Firstly, Tindo predominantly sells poly-crystalline AC PV modules or panels (DC PV modules or panels represented a small proportion of Tindo's overall sales volume in the investigation period). Imports, on the other hand, are predominantly DC models. The Commission's analysis, therefore, compared Tindo's sales of DC models with sales of imported DC PV modules or panels.

Secondly, some selected importers whose data was verified by the Commission sell PV modules or panels as a 'package price' which includes installation costs. When comparing Tindo to those importers, the Commission used Tindo's installed prices in the analysis.

### Methodology

In the SEF, the Commission used three different levels of trade and different packages to compare the price of imported PV modules or panels (by making some adjustments to the imported goods) to those sold by Tindo during the investigation period.

Following the publication of the SEF, the Commission revised its pricing analysis by comparing imported poly-crystalline DC PV modules or panels to Tindo's quarterly net selling price (AUD per watt), at a comparable level of trade. This is because the Commission could only realistically compare actual sales at this level without making any adjustments or assumptions. To conduct this analysis, the Commission used verified domestic sales data of Tindo's manufactured goods during the investigation period and the verified sales data of the five major importers.

One of the five major importers did not sell poly-crystalline DC PV modules to distributors and/or retailers therefore that importer's data was eliminated from the analysis. The other four importers collectively accounted for approximately 16 per cent of the total imports of poly-crystalline DC PV modules exported from China during the investigation period. Prices of those imports were lower than Tindo's price by between 26 per cent and 56 per cent. The weighted average price achieved by those four importers during the investigation period was approximately 47 per cent lower than Tindo's price.

Figure 10, below, compares the prices of dumped and (after imposing the weighted average dumping margin of 21.1 per cent) undumped DC PV modules or panels with prices of the Australian industry's sales of both DC and AC PV modules or panels.

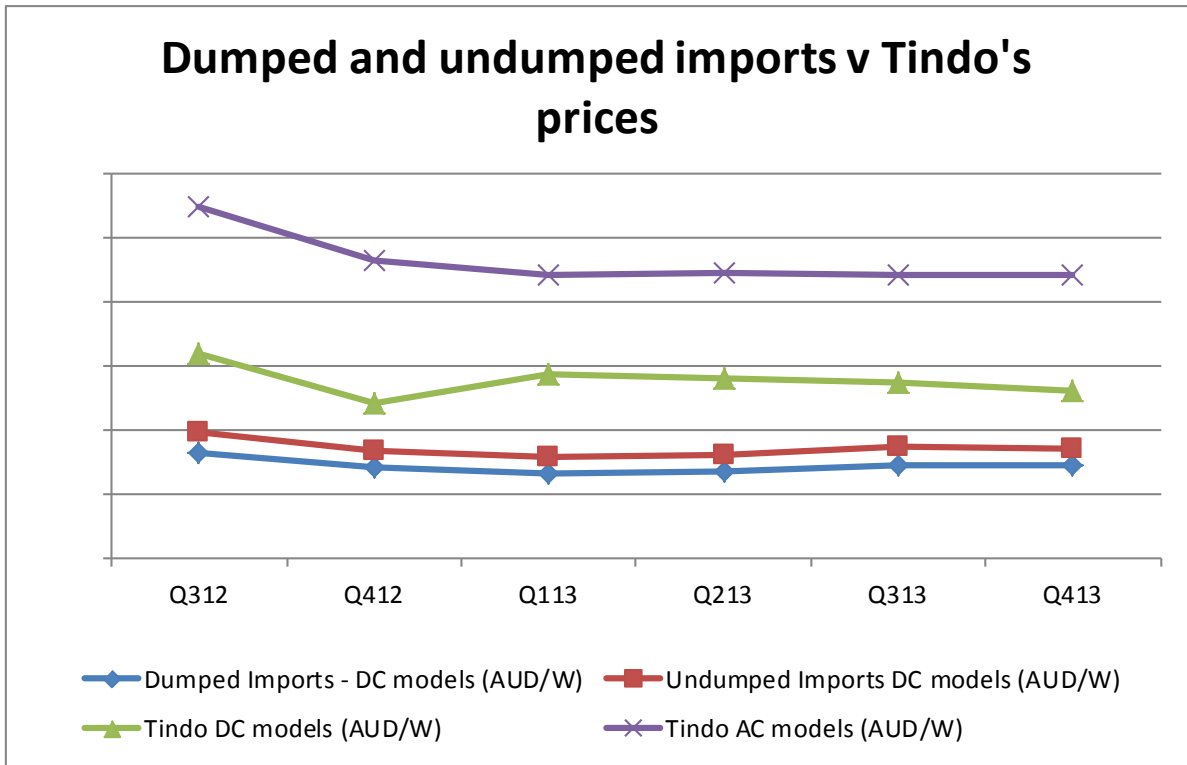


Figure 10 – Dumped and undumped PV modules or panels prices v Australian industry’s prices

Figure 10 illustrates that even in the absence of dumping, PV modules or panels from China have a significant price advantage. If the export prices during the investigation period were equivalent to the normal values found (that is, if there was no dumping), Tindo would still have been required to reduce its prices by a significant amount to attract customers. The Figure 10 illustrates the significance of other factors causing injury.

The Commission noted that the undumped prices in Figure 10 would have had an advantage over Tindo’s DC PV modules or panels prices by approximately 38 per cent. Given the high degree of price sensitivity in the market and the preference for DC models, the Commission has concluded that factors other than the dumping have caused any price injury suffered by the Australian industry.

**8.4.3 Non-injurious price**

The Commission calculated a non-injurious price (NIP) by establishing an unsuppressed selling price (USP) using Tindo’s CTMS data. No profit was applied. The Commission deducted from the USP amounts for importer selling, general and administrative expenses, profit and relevant post-exportation expenses verified as part of the investigation.

The Commission compared the NIP with weighted average export prices of PV modules or panels exported from Australia from china during the investigation period. The NIP was significantly higher than the weighted average export prices of all exporters during the investigation period.

#### **8.4.4 Comparison with business plan**

As discussed in section 8.2 of this report, Tindo commenced operating in mid-2012. Given that there was no prior historical information to compare Tindo's performance, the Commission used the business and marketing plan developed by Tindo in 2010 -11 to compare with Tindo's actual performance. The Commission noted that in the investigation period Tindo's business and marketing plan was clearly directed towards AC PV modules or panels. Tindo automatically quotes a price for AC PV modules or panels unless specifically requested to quote for DC PV modules or panels.

A comparison of the forecast price per watt for Tindo's PV modules or panels with the actual selling price achieved shows that actual prices were significantly below the forecast. The business plan shows that Tindo projected that its selling price would reduce over time, in line with cost reductions, however the actual price reduction that occurred over the investigation period was of a greater magnitude than the forecast.

The business plan shows Tindo's estimate of the price being offered for imported panels at the time of preparing the business plan. Based on these estimates, the forecast selling price at the commencement of Tindo's operation was not too dissimilar to the then forecast<sup>41</sup> price of imported models. However, based on evidence gathered during the investigation it is apparent that the estimates of the import selling prices were greatly overstated.

A comparison of Tindo's forecast price per watt at the commencement of its operation with known prices for imports from China during the investigation period shows that Tindo's starting selling price was more than double that of the imported models.

#### **8.4.5 Conclusion**

The Commission noted that pricing is highly transparent in the PV modules or panels industry. The Commission observed that due to aggressive marketing strategies adopted by Tindo's competitors, prices for PV modules or panels had been widely advertised in various media sources. As such, the Commission considers that consumers and suppliers of PV modules or panels were well aware of the prices offered in this market.

As outlined in Chapter 5 of this report, while the Commission found sufficient grounds to establish that Tindo has experienced price depression and reduced profit and profitability, Tindo predominantly sold AC PV modules or panels in the investigation period that are significantly more expensive than DC PV modules or panels exported from China.

Although Tindo can produce and has sold some DC PV modules or panels during the investigation period, Tindo's marketing and business plan were clearly directed towards AC PV modules or panels.

Noting the size of the difference in prices for the imported goods, Tindo's prices and the dumping margins found during the investigation period, the Commission is not satisfied that, in the absence of dumping, Tindo would have been able to reduce its selling prices

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<sup>41</sup> Tindo's business plan was developed approximately 8 months prior to its commencement of operations.

of AC PV modules to the extent required to ensure Tindo's prices were competitive with DC PV modules exported from China, even after allowing for the premium that would be expected for an AC model over a DC model. The Commission is therefore satisfied that any price injury suffered by Tindo that was caused by dumping is negligible. For the same reason, the Commission is also satisfied that any hindrance to Tindo's establishment caused by dumping is also negligible.

## **8.5 Volume effects**

Section 269TAE(1)(g) of the Act states that in determining whether injury has been caused by dumping the Parliamentary Secretary may have regard to any effect that the exportation of goods of that kind to Australia from the country of export in those circumstances has had or is likely to have on the relevant economic factors in relation to the Australian industry. s.269TAE(3) states that one of those economic factors is the quantity of goods of that kind, or like goods, produced or manufactured in the industry.

### **8.5.1 Tindo's claims**

Tindo has not claimed injury from overall loss of sales volume. The data provided by Tindo and verified by the Commission shows that its overall sales volume has grown since its establishment in July 2012. However, as noted in section 8.1 of this report, the Commission has assessed Tindo's claims when examining whether dumped exports have materially hindered the establishment of an Australian industry. This is appropriate in the context of Tindo's position in the life cycle of a business.

Tindo's sales of PV modules or panels to wholesale customers have declined during the investigation period. Tindo submits that during the investigation period, as a result of this decline it was forced to change its business strategy to market and supply PV modules or panels directly to the end-users instead of supplying to the wholesalers (distributors and retailers).

### **8.5.2 Market size and trends**

The information gathered by the Commission during the course of the investigation, including the information provided by importers and exporters and submissions received from interested parties, suggests that there has been a shift in the PV modules or panels market in Australia, and globally, during the injury analysis period as discussed below.

#### Global Market

- As discussed in Section 3 of this report, there are two types of cells, being poly-crystalline cells and mono-crystalline cells, used to manufacture PV modules or panels. Towards the end of the investigation period there was a clear shift in exporters moving away from mono-crystalline cells (as they are more expensive) to poly-crystalline cells; and
- due to improved technology, reduction in input costs, global competition and economies of scale, the price of imported PV modules or panels has significantly reduced.

Australian Market

Figure 11 below analyses the Australian market for PV modules or panels during the injury analysis period (January 2010 to December 2013).

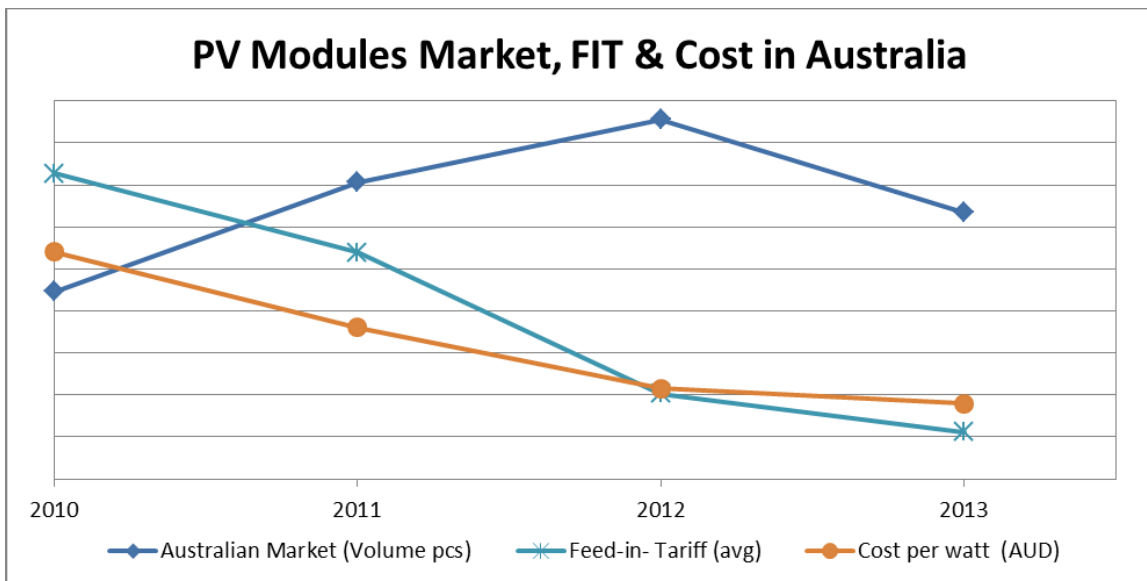


Figure 11 – PV Modules Market, FIT & Cost in Australia<sup>42</sup>

Figure 11 demonstrates that:

- the FIT incentive offered by various States and Territories have been consistently decreasing since 2010, from an average of 60 cents per kilowatt hour (kWh) in 2010 to less than 8 cents per kWh in 2012. The FIT rates in New South Wales, Western Australia and the Australian Capital Territory were abolished in 2012. In 2013 South Australia also abolished its FIT incentives;
- the price of PV modules and panels has been consistently decreasing during the injury analysis period, from an average of \$6 per watt in 2010 to less than \$2 per watt in 2013;
- despite the FIT being withdrawn by the States and Territories, the aggressive marketing strategies and intense competition among the players in the PV modules or panels industry, coupled with a reduction in input costs, kept the prices of PV modules or panels down, which led to an upward trend in the volume of PV modules or panels installed from 2010 to 2012; and
- after reaching its peak in 2012, the Australian market for PV modules or panels started to decline.

**8.5.3 Comparison with Tindo’s business plan**

A comparison of the forecast volume in Tindo’s business plan with actual volumes achieved confirms that Tindo’s actual performance was well below forecast. Based on the market volume calculated for the purpose of this investigation, Tindo forecasted that it

<sup>42</sup> Information was sourced from the Clean Energy Regulator, State government websites, ABF import database, the Australian industry and submissions from interested parties.



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would achieve around 1 per cent of the market share by the end of calendar year 2013. Tindo's actual achievement of the market share was less than 1 per cent.

The Commission considers that this lower market share was a result of Tindo's selling price being substantially higher than the price of the imported product. The Commission considers that in its business plan, Tindo had underestimated the prices of imported goods during the 18 month period, and for this reason was unable to achieve its expected market share. In preparing the business plan Tindo had forecast a growing market; however, as the Commission has previously noted, the market had peaked in 2012 and was already in decline when Tindo commenced operation.

### 8.5.4 Commission's assessment

The Commission considers that reducing the rate of FIT incentives provided by the States and Territories (including the abolition of FIT incentives by New South Wales, Western Australia and the Australian Capital Territory in 2012) had a direct impact on the PV modules or panels industry, including Tindo.

The Commission considers that the market for PV modules or panels is highly competitive due to declining demand in the residential sector and the existence of a large number of suppliers. Tindo's competitors, who are supplying the Australian market with DC PV modules or panels that are predominantly imported from China, use aggressive marketing strategies such as public advertisements in newspapers, radio stations, television channels, newsletters and websites.

The Commission is satisfied that the evidence provided demonstrates that:

- Tindo's business plan and strategies were prepared in 2011 when the market was growing and Tindo was expected to commence operating in 2011. However, Tindo commenced operating in mid-2012 (8 months after finalising its business plan and forecasts), when the market had started to decline, therefore some of the assumptions and forecasts in Tindo's original business plan were not up to date at the time of its commencement;
- Tindo's focus has been on AC PV modules or panels which are more expensive and are attractive to a limited group of customers (i.e. to those people who are willing to spend more for the benefits said to be provided by AC modules or panels); and
- Tindo was able to grow its overall sales volume over its first 18 months of operation, albeit not in line with its forecasts. However, it cannot be reasonably concluded that Tindo's volume of sales was inconsistent with overall market trends.

Noting the significant difference in selling price between AC PV modules and DC PV modules, the Commission is not satisfied that Tindo's loss of volume to wholesalers (distributors and retailers) and its inability to grow volume in line with its business projections is due to the dumping of PV modules or panels from China.

As discussed in Section 8.3, the size of the dumping margins found is less than the price advantage obtained by the imported goods. The Commission considers that the imposition of a dumping duty at the levels found would not have significantly influenced consumers to switch to Tindo's AC modules or panels during the investigation period.

The Commission, therefore, concludes that dumping has not caused volume injury, in terms of loss of sales volumes, to the Australian industry and nor did it hinder Tindo's ability to achieve higher sales volumes than it did during the investigation period.

## **8.6 Injury caused by factors other than dumping**

Section 269TAE(2A) of the Act states that the Parliamentary Secretary must consider whether any injury to an industry, or hindrance to the establishment of an industry, is being caused or threatened by a factor other than the exportation of those goods and any such injury or hindrance must not be attributed to the exportation of those goods.

The Commission has considered factors outlined in s.269TAE (2A) and also examined other potential causes of injury to Tindo, other than dumped goods exported from China.

### **8.6.1 Volume and prices of like goods that are not dumped - s.269TAE(2A)(a)**

In its application, Tindo identified China as a major source of supply of imported PV modules or panels. The Commission's analysis of the ABF import database, its discussions with major importers and the publicly available information all confirm that China is the major source of supply of PV modules or panels to Australia. During the injury analysis period (from 1 January 2010 to 31 December 2013), imports of PV modules or panels from China comprised around 90 per cent of the total volume of imports. Other countries that made up the majority of the remaining imports were Germany, Singapore, South Korea and Japan.

As Chinese goods are clearly the dominant source of import supply to the Australian market the Commission considers the volume and prices of imports from non-subject countries are unlikely to have had a material impact on Tindo.

### **8.6.2 Contractions in demand or changes in patterns of consumption – s.269TAE(2A)(c)**

As discussed in Section 8.5.2 of this report the reduction of the FIT rates offered by various States and Territories from 2010 was one of the major reasons for the PV modules or panels market to slow down after 2012. The FIT rates offered by New South Wales, Western Australia and Australian Capital Territory were abolished in 2012 and by South Australia in 2013.

The PV modules or panels market peaked in 2012 and started to decline. Tindo entered the PV modules and panels market in mid-2012 when the demand for the PV modules or panels was declining.

While not necessarily a 'change' in the pattern of consumption, the Commission has outlined that DC PV modules or panels have a significant price advantage over AC PV modules or panels. Significant marketing effort is required to influence consumers to choose the higher-end AC models over DC models based on the perceived value assigned to the benefits they are said to provide. It is apparent that this shift in perception had not yet gained sufficient momentum to drive consumers to pay significantly more for the AC model during the investigation period.

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It is therefore considered that contractions in demand or changes in patterns of consumption have significantly contributed to the injury experienced by Tindo during the injury analysis period.

### **8.6.3 Developments in technology – s.269TAE(2A)(e)**

The Commission has received representations from interested parties that due to technological advancements, such as improved efficiency of poly-crystalline cells over mono-crystalline cells (which were more expensive) have led to the reduction in cost of PV modules or panels over the investigation period. Interested parties argued that prices declined due to a combination of replacing mono-crystalline cells with poly-crystalline cells and the underlying price of mono-crystalline cells reducing significantly.

During the investigation period Tindo only used poly-crystalline cells to manufacture PV modules or panels. Tindo predominantly imports all major raw materials.

During its verification visit to Tindo, the Commission observed Tindo's manufacturing process and noted that Tindo uses technology (automated machines for assembling cells and testing PV modules) to manufacture PV modules or panels, while the Chinese exporters visited by the Commission generally manufacture (assembly of cells) PV modules or panels manually.

The Commission is therefore satisfied that Tindo is utilising technology in its manufacturing process and hence failure to adopt this technology is not considered to be at issue in this case.

### **8.6.4 Other matters**

#### Insufficient production capacity of the Australian industry

The Commission received various submissions from interested parties that the Australian industry has insufficient production capacity to supply PV modules or panels to the Australian market. Public record versions of those submissions are on the Commission's website.

The Commission also received submissions claiming that, among other issues such as Tindo's bankability, credit history and accreditation by the Clean Energy Regulator, Tindo does not have sufficient capacity and is not 'certified' to produce PV modules or panels that produce electricity at 300 watts and above per module. This type of module is predominately used in large-scale ground-mounted solar farms.

There is no requirement for the Australian industry to have the capacity to meet the entire Australian market for their manufactured products in order to be able to seek relief from dumping under the Act.

Available evidence, including that submitted by Tindo in its application and verified by the Commission, indicates that the size of the Australian market was significantly larger than the full production capacity of Tindo throughout the investigation period.

The Commission is aware that Tindo predominantly produces and sells PV modules or panels with power output of 240 watts and 250 watts. During the investigation period

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Tindo was not certified to produce PV modules or panels that produce power output of 300 watts and above. This may have limited Tindo's ability to participate in tenders for utility projects that require large quantities of PV modules with power output of 300 watts and above to be mounted on the ground. The Commission is aware that, while no utility projects have been established during the injury analysis period, some tendering and negotiations have occurred with the Chinese suppliers for solar farm projects that require large quantities of PV modules with power output of 300 watts and above.

According to the ABF import database only a minor volume (less than 1 per cent of total imports) of PV modules or panels with power output of 300 watts and above were imported during the investigation period. The Commission did not find that the four selected exporters supplied PV modules or panels with power output of 300 watts and above during the investigation period.

### Business and marketing strategies

The Commission notes that at the commencement of its business, Tindo's marketing strategies were initially targeted towards the residential sector through distributors (wholesalers). In mid-2013 Tindo started to sell its products directly to the end users in the residential and commercial sectors.

Tindo predominantly manufactures and sells AC PV modules or panels, which are considered as 'premium' product by the PV modules or panels industry. As discussed in this report, AC PV modules are significantly more expensive than DC PV modules or panels.

Based on the data provided to the Commission, Tindo's primary market during the investigation period was South Australia. As set out previously, the South Australian government reduced the FIT rate to zero in September 2013, therefore gaining increased sales volumes in this market was likely to be more difficult. From the Commission's discussions with the major importers, and based on observations of public advertisements for PV modules or panels, Tindo does not appear to aggressively market its product as compared to its competitors, which not only sell significantly cheaper DC PV modules or panels but are fiercely competing with each other in the same market. This gives the end-user a variety of choices and pushes the price of DC PV modules or panels even lower. The Commission considers that this is likely to have been the case even in the absence of the current dumping margins.

## 8.7 Conclusion

Tindo has lost sales volume in the wholesale market only. Total sales, on the other hand, have increased over the 18 month investigation period. In so far as the wholesale market is concerned, the decline in sales has been primarily caused by the preference of the end users for lower priced DC models.

The price suppression, price depression, and the losses of profit and profitability that Tindo experienced during the investigation period have, in the Commission's view, been primarily caused by the preference of the market for DC rather than AC models. This preference is a result of the significant price differential between the two, and the price sensitivity of that market leads to a preference for imported, DC models rather than Tindo's AC models. Although the imported products were dumped, even in the absence

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

The Commission considers that Tindo's business and marketing strategies, together with the timing of its entry to the Australian market with a premium product, meant that Tindo was unable to reach its business forecast.

Tindo had not claimed threat of injury and accordingly the analysis above focusses on any existing injury and hindrance to the establishment of an industry. The Commission, therefore, considers that in these circumstances the dumping of PV modules or panels is causing negligible injury to Tindo, and is not hindering the establishment of the Australian industry.

## 9 OTHER SUBMISSIONS RECEIVED FOLLOWING THE PUBLICATION OF THE SEF

In addition to the submissions received from the four selected exporters in response to the SEF as discussed in section 6 of this report, submissions were received from the following interested parties:

- i. The Australian industry Tindo;
- ii. the Government of South Australia ;
- iii. the Clean Energy Council of Australia; and
- iv. the China Chamber of Commerce of Import and Export of Machinery and Electronic Products.

Public Record versions of these submissions are available on the Commission website.

The issues raised in the submissions and the Commissions responses are discussed below.

### 9.1 Australian Industry's submission

In its submissions dated 4 May 2015, 2 July 2015, 31 August 2015, Tindo Solar submitted the following issues:

- i) *A particular market situation claims* - Tindo referred to a preliminary report regarding PV modules or laminates investigation published by the CBSA. In that report CBSA stated that the costs and prices of the PV modules or laminates in China are significantly distorted. Based on this Tindo requested the Commission to further investigate its particular market situation allegations.
- ii) *Dumping margins* – Tindo claims that the dumping margins assessments in the SEF are understated by firstly, not making a finding of a particular market situation in China and secondly, by not taking into consideration of all relevant costs of the related companies of the 4 selected exporters.
- iii) *Cost of make and sell* – Tindo claims that in assessing all relevant costs, the Commission should review the selling general and administration expenses, research and development costs, depreciation and capital expenditure of the consolidated group of companies comprising the parent company and all subsidiaries for the selected exporters.
- iv) *Transparency* – Tindo claims that publicly available information is being redacted or submitted as confidential attachments by some of the selected exporters.
- v) *Australian market for solar panels* – Tindo submitted that an earlier Australian PV modules or panels manufacturer 'BP Solar then SilexSolar', in 2010 announced the closure of its solar module assembly line as it was unable to compete with the pricing of PV modules or panels from China.
- vi) *Injury* – Tindo agrees with the Commission's finding that the Australian industry has suffered material injury in the form of lost sales volume (in the wholesale

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market only), price depression, price suppression and reduced profit and profitability.

- vii) *Causal link* – Tindo does not agree with the Commission's findings in the SEF that dumping is causing negligible injury to the Australian industry. Tindo provided further information (confidential and non-confidential) claiming that the injury caused by dumping margins in the SEF (3.9%) is material and is significant to its operations.

The Commission's consideration of the issues submitted by Tindo is discussed below:

- (i) Regarding items (i) and (ii) - the Commission sought further extension of time from the then Parliamentary Secretary to fully investigate Tindo's market situation allegation. The Commission has found that a particular market situation exists in the PV modules or panels market in China. A detailed market situation assessment is at **Non-Confidential Appendix 2**.

Based on the market situation findings, the Commission sought additional cost information from the four selected exporters and re-calculated normal values and dumping margins as detailed in Chapter 6 of this report. The Commission is satisfied that the information provided by the selected exporters and verified by the Commission includes all relevant costs in the CTMS.

- (ii) *Cost to make and sell* - In relation to the inter-company transactions between subsidiaries and the parent company of the four selected exporters, the Commission is satisfied that it has appropriately tested and accounted for all relevant transactions. While the detail of the costs and verified information are confidential, the Commission is satisfied that there has been no manipulation of the cost of inputs to the manufacture of PV modules or panels by the four selected exporters.
- (iii) Regarding items (iv), (v), (vi) and (vii) the Commission noted the issues raised in Tindo's submission. While the Commission found that a particular market situation exists in the PV modules or panels market, the Commission has found that the dumped goods caused negligible injury to the Australian industry. A detailed discussion of material injury and causation is at Chapter 8 of this report.

In its submissions dated 31 August 2015, 7 September 2015, 18 September 2015, 23 September 2015 and 1 October 2015, Tindo submitted that as a matter of urgency the Commissioner ought to make a preliminary affirmative determination (PAD) and impose securities whilst the investigation continues. In addition to the issues outlined in its earlier submission dated 4 May 2015 and repeated in these submissions, Tindo included the following issues:

- (i) In the 21 months since the investigation period of July 2012 to December 2013, the Australian industry has continued to win sales against dumped imports which contradict the Commission's assessment in the SEF. The SEF stated that even in the absence of dumping, Tindo would not be able to reduce its selling prices of AC PV modules to the extent required to ensure Tindo's prices are competitive with DC PV modules exported from China.

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- (ii) Assuming a dumping margin of 3.9 percent (as per the SEF) was applied to the goods from China, Tindo conservatively estimates that this would have increased Tindo's sales revenue at the very least by 3 percent. Tindo further claims that a reduction in the price advantage of the Chinese imports would have increased Tindo's sales volumes such that Tindo's sales revenue would have increased by a minimum of 4 percent, which is not negligible.
- (iii) Tindo claims that by not remedying the dumping margin the Chinese imports are being afforded a comparative advantage to the Australian industry. This continues to cause material injury to Tindo in the form of lost sales volumes, price suppression and depression and lost profitability and profits.
- (iv) Tindo requested the Commissioner make a PAD and take securities based on the dumping margins found in the SEF whilst the Commission continues to investigate a particular market situation claims.

The Commission considers that the above issues raised by Tindo have been adequately addressed in various sections of this report.

### 9.2 Government of South Australia

On 4 May 2015, the Department of State Development of the Government of South Australia (GOSA) submitted the following issues:

- (i) *Dumping margin* – the GOSA is submitted that it was concerned that the level of dumping found in the SEF may have been underestimated. The GOSA requested the Commission to further investigate the costs of production of the 4 selected Chinese exporters. The GOSA also stated that due to the GOC's intervention in the PV modules or panels market, the Chinese domestic selling prices may be an unsuitable for the establishment of normal value.
- (ii) *Market segmentation by panel technology* – the GOSA stated that the Commission appears to have placed more emphasis on DC modules or panels only and did not consider AC modules or panels appropriately when assessing material injury caused by dumping. As a result the Commission erroneously found that dumping is causing negligible injury to the Australian industry.
- (iii) *Market dynamics* – the GOSA stated that the changing policy at both the State levels and Australian Government; and the declining market may have created an environment where there was a strong incentive for larger suppliers of PV modules or panels to sell excess goods into the Australian market, while the industry is rationalising. The GOSA claims that under these circumstances there is a greater chance of injury caused to the Australian industry by dumping.

The Commission considers that the above issues raised by the GOSA have been adequately addressed in various sections of this report.



### 9.3 Clean Energy Council

In its submission dated 27 April 2015, the Clean Energy Council (CEC) stated that it concurs with the Commissioner's recommendation in the SEF to terminate the investigation and urges that all parties work together constructively within the framework of the China-Australia Free Trade Agreement to achieve outcomes of mutual benefit for the renewable energy industries of China and Australia.

The Commission noted the CEC's comments.

### 9.4 China Chamber of Commerce of Import and Export of Machinery and Electronic Products (CCCME)

In its submission dated 29 May 2015, CCCME submitted the following issues:

- (i) *Lateness of Tindo's submission* - the CCCME stated that the Commissioner is not obliged to have regard to any submission received after 20 days of the publication of the SEF. .
- (ii) *New Information* – the CCCME submitted that the investigation included a particular market situation claims and the Commission's findings is published in the SEF. The CCCME further stated that if Tindo considers that a particular market situation exists in China then it is open to Tindo to make another application that identifies how the policies of the GOC influence the prices of the PV modules or panels in the Chinese domestic market  
Furthermore the CCCME submitted that:
  - Neither Canada nor USA treat China as a market economy and it is not surprising they find that the GOC influences prices of the goods they investigate;
  - there are various forms of government programs that influence domestic selling prices of solar panels in Australia and may not reflect competitive market prices. When forming a view regarding whether Chinese domestic sales are unsuitable for use as a normal value, the Commission should consider comparable activity by the Australian government in the Australian market.
- (iii) *Material Injury*– the CCCME claims that *the* Commission found that the level of Tindo's price compared to the Chinese imports was about 45 per cent, consequently, if export prices equalled normal values Chinese imports would continue to significantly undercut Australian industry prices.
- (iv) *Terms of Reference to LECA* - the CCCME stated that the file note published by the Commission did not include the consultant's terms of reference  
Therefore, it was unclear what information was provided or made available to the consultant by the Commission as part of the consultant's 'brief' referred to in the report prepared by Dr Barker.

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- (v) *Market Situation Factors Report by Dr George Barker (LECA)* - the CCCME stated that there are several shortcomings of the report highlighting the following:
- It appears the consultant did not independently obtain information regarding intervention in the Chinese PV modules or panels market, the nature of any such intervention and the effect, if any, of any such intervention on the PV modules or panels market in China;
  - the report merely indicates what “may” occur, “may be expected” to occur or to be “likely” to occur in the Chinese PV modules or panels market;
  - nothing in the report states the basis to make any findings regarding the existence of a particular market situation or “competitive market costs”. It merely presents speculation, based on assumptions together with economic theory and modelling; and
  - that there is no basis how the benchmark for the PV cells was recommended as ‘*Bloomberg New Energy Finance (BNEF)*’ and that how the BNEF represents a competitive market price.

The Commission has considered the issues raised by the CCCME in its submission as discussed below:

- (i) Regarding items (i) and (ii) the Commission wishes to clarify that Tindo requested an extension of time to respond to the SEF. The Commissioner exercised his discretionary powers and granted an extension of one week to Tindo. The Commissioner accepted Tindo’s submission and additional information and sought time from the then Parliamentary Secretary to fully investigate Tindo’s claims.
- (ii) *Material Injury to Tindo* –The Commission found that the revised dumping margin is causing negligible injury to the Australian industry as detailed in Chapter 8 of this report.
- (iii) Terms of Reference Dr George Barker (LECA) and Market Situation Factors Report - the terms of reference is at **Non-Confidential Appendix 1**.

While the Commission engaged Dr Barker of LECA to independently research and provide information relevant to the market situation factors in China regarding PV modules or panels industry, the Commission did not solely rely on Dr Barker’s report to determine the existence of market situation. The Commission used all relevant sources of information to make its findings as discussed in this report.

Based on the best available information, the Commission found that the GOC has significantly influenced the supply and demand of PV modules or panels in China. The Commission’s assessment of a particular market situation findings is at **Non-Confidential Appendix 2**.

## **10 CONCLUSION**

Under s.269TDA(13) of the Act, if the Commissioner is satisfied that the injury, if any, to an Australian industry, or the hindrance, if any, to the establishment of an Australian industry, that has been, or may be, caused by that export is negligible, the Commissioner must terminate the investigation so far as it relates to that country.

The Commissioner is satisfied that the PV modules or panels exported from China during the period 1 July 2012 to 31 December 2013 (the investigation period) were exported at dumped prices. However, the injury to the Australian industry or the hindrance to the establishment of an Australian industry that has been, or may be, caused by those dumped exports is negligible.

The Commissioner has therefore terminated the dumping investigation so far as it relates to PV modules or panels exported to Australia from China.

**11 APPENDICES AND ATTACHMENTS**

<b>Non-Confidential Attachment 1</b>	Terms of reference provided to of Law and Economic Consulting Associates Ltd
<b>Non-Confidential Attachment 2</b>	Assessment of a Particular Market Situation Report
<b>Non-Confidential Attachment 3</b>	Benchmark report for photovoltaic cells
<b>Confidential Appendix 4</b>	Export prices, normal values and dumping margin calculations
<b>Confidential Appendix 5</b>	Feed-in-Tariff, cost and number of installations
<b>Confidential Appendix 6</b>	Copy of Tindo's business plan

**APPENDIX 1: TERMS OF REFERENCE**

**SERVICES TO BE PROVIDED BY LAW AND ECONOMIC CONSULTING ASSOCIATES LTD**

**ASSESSMENT OF THE MARKET SITUATION FACTORS  
IN THE PEOPLE'S REPUBLIC OF CHINA  
FOR CRYSTALLINE SILICON PHOTOVOLTAIC MODULES OR PANELS**

**1. Objective**

To provide a report that identifies, analyses and explains matters relevant to the Anti-Dumping Commission's (the Commission's) assessment about whether the situation in the domestic market in the People's Republic of China (China) for crystalline silicon photovoltaic modules or panels (PV modules or panels) is such that sales in that market are not suitable for assessing the normal value of PV modules or panels in China during 2012 and 2013.<sup>43</sup>

The report should include information relevant to the production and sales of:

- PV modules or panels; and
- Upstream major raw materials (cells, wafers, ingots and polysilicon) used in the manufacturing of PV modules or panels.

The report should include, but not be limited to, examination of:

- direct and indirect payments made to PV modules or panels manufacturers by the Government of China<sup>44</sup> (GOC);
- government regulations on the production of PV modules or panels, cells, wafers, ingots and polysilicon;
- government regulations on imports of major upstream raw materials (cells, wafers, ingots and polysilicon);
- government regulations on export of major upstream raw materials (cells, wafers, ingots and polysilicon);
- any direct or indirect financial support offered by the GOC to the manufactures of PV modules or panels and/or to the suppliers of upstream raw materials; and
- any other factors seen as relevant to be influencing the cost of production and/or the prices PV modules or panels in the Chinese domestic market.

The report should also include a means for the Commission to estimate the price of major upstream raw materials (i.e. cells/wafers/ingots/polysilicon) if any significant distortions in the relevant markets found were removed.

The analysis and explanations should include discussion of whether and to what extent certain specified factors impact upon supply, demand and prevailing prices in the relevant market. Supporting evidence should be included with appropriate references.

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<sup>43</sup> The Commission will examine exportations of PV modules or panels to Australia from China (by certain exporters) during the period from 1 July 2012 to 31 December 2013 (the investigation period) to determine the level of dumping.

<sup>44</sup> For the purposes of this report, GOC refers to all levels of government, i.e., central, provincial, regional, city, special economic zone, municipal, township, village, local, legislative, administrative or judicial, singular, collective, elected or appointed. It also includes any person, agency, enterprise, or institution acting for, on behalf of, or under the authority of any law passed by, the government of that country or that provincial, state or municipal or other local or regional government.

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The report should not draw conclusions as to whether a ‘particular market situation’ exists.

Where appropriate, the report should also provide indications of how/where to probe the issues further during the Anti-Dumping Commission’s investigation.

### 2. Timing

The Anti-Dumping Commission requires the Consultant to provide an interim de-brief by **22 June 2015** and the final report by **30 June 2015**.

### 3. Background

The Anti-Dumping Commission commenced an investigation into the alleged dumping of PV modules or panels exported to Australia from China on 14 May 2014 following an application from the Australian industry, which claimed the dumping from China was causing it material injury. Available for your information are the following non-confidential copies of:

- the Australian industry’s application for a dumping duty notice, <http://www.adcommission.gov.au/cases/Documents/001-Application-Australianindustry-TindoManufacturingPtyLtd.pdf>;
- Anti-Dumping Notice (ADN) Number 2014/38, <http://www.adcommission.gov.au/cases/Documents/031-ADN-201438-Initiationofaninvestigationintoallegeddumping.pdf>; and
- the Statement of Essential Facts no. 239 that contains the Commission’s preliminary findings, <http://www.adcommission.gov.au/cases/Documents/112-SEF.pdf>.

#### 11.1.1 Normal value

A critical part of the Anti-Dumping Commission’s investigation is the assessment of dumping, which involves the comparison of export prices with normal values. Section 269TAC of the *Customs Act 1901* (the Act) contains provisions for establishing normal value. The first method, set down in s.269TAC(1) of the Act, is to use the:

*“... price paid or payable for like goods sold in the ordinary course of trade for home consumption in the country of export in sales that are arms length transactions by the exporter or, if like goods are not so sold by the exporter, by other sellers of like goods.”*

However s. 269TAC(2)(a) of the Act provides where the Minister is satisfied that:

- “ (i) *because of the absence, or low volume, of sales of like goods in the market of the country of export that would be relevant for the purpose of determining a price under subsection (1); or*
- (ii) *because the **situation in the market of the country of export is such that sales in that market are not suitable** for use in*

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*determining a price under subsection (1)*” (emphasis added)

then, normal value cannot be ascertained under subsection 269TAC(1).

### 11.1.2 Situation in the market

The Anti-Dumping Commission considers that sales that would otherwise be relevant for determination of normal value may be unsuitable because the price does not reflect a fair price in normal market conditions. In assessing whether sales are suitable, the Commission would consider whether a situation in the market causes prices to be artificially low. In this assessment it would be relevant to also examine the degree of government influence.

Information in the Australian industry’s application, and information available publicly, suggests the PV modules or panels industry in China is one that may have a considerable degree of GOC involvement. There may be, for example, evidence of:

- GOC policies including “12<sup>th</sup> Five Year Plan for the Solar Photovoltaic Industry”, “12<sup>th</sup> Five Year Plan for Renewable Energy Development” etc. indicating the GOC’s influence on the production costs leading to lower selling prices of PV modules or panels;
- GOC policies or regulations in relation to increased production of PV modules or panels creating an oversupply of PV modules or panels in the Chinese domestic market;
- GOC policies or regulations for re-organisation of PV modules or panels industry (including major upstream raw material suppliers) such as vertical integration, mergers and acquisitions providing significant cost advantages to the PV modules or panels manufacturers;
- various forms of financial support and other subsidies provided to domestic PV modules or panels industry including refund or exemption of land fee, reduced corporate income tax, full or partial refund of value-added tax and reduced interest rates on loans by the GOC (including state banks);
- GOC through the *National Development & Reform Commission* providing refund of import taxes to ‘research and development equipment’s’ used by the PV modules or panels manufacturers or upstream raw material industries;
- GOC’s control on entry level prices, external tariffs, import quotas and import levies affecting the production and pricing of PV modules or panels in China.

The mere existence of support mechanisms by the GOC in the PV modules or panels industry may not necessarily translate to a significant distortion of costs and/or prices of PV modules or panels. However, if an assessment of the situation in the market for PV modules or panels in China reasonably concludes that the GOC influence on costs and/or prices of PV modules or panels means that prices for PV modules or panels in China are artificially low, then the sales may not be considered suitable for establishing normal value.

### Sufficiency of Evidence

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The Anti-Dumping Commission considers evidence to support claims of a market situation:

- does not need to be conclusive or irrefutable
- must be relevant, and reasonably reliable, and unless rebutted, would be reasonably supportive of a finding that domestic selling prices are unsuitable for normal value.

The factors listed above are not an exhaustive list of factors that may generate evidence that a situation in the Chinese domestic market for PV modules or panels exists. The consultant may identify other factors that may provide relevant evidence. However, as part of this research, the consultant is not required to make a finding that a particular market situation is present in China, affecting the domestic price of PV modules or panels. A finding that a particular market situation exists is a statutory finding that may be made by the Parliamentary Secretary to the Minister for Industry and Science as part of the dumping investigation into PV modules or panels.



**APPENDIX 2**

**ANTI-DUMPING COMMISSION'S ASSESSMENT  
OF A PARTICULAR MARKET SITUATION**

**PV MODULES OR PANELS INDUSTRY IN CHINA**

## 1 BACKGROUND

The Anti-Dumping Commission (Commission) published the Statement of Essential Facts (SEF) No. 239 on 7 April 2015. The SEF concluded that while crystalline silicon photovoltaic modules or panels (PV modules or panels) were exported from China at dumped prices during the investigation period (1 July 2012 to 31 December 2013), the injury caused by these exports was negligible. Based on these findings, the Commissioner proposed to terminate the investigation.

Following the publication of SEF, Tindo Solar Pty Ltd (Tindo) provided additional information to the Commission asserting that various Government of China (GOC) policies and measures had impacted the costs of raw materials and prices of PV modules or panels in China. Tindo claims that domestic Chinese prices of PV modules or panels are not substantially the same as they would be in a competitive market.

Tindo's allegations were based on the findings by the Canadian Border Service Agency's (CBSA) investigation into dumping and subsidising of certain photovoltaic modules and laminates originating in or exported from China.<sup>45</sup> The Public Record version of Tindo's submission is available on the Commission website. It stated that in a preliminary report published by the CBSA on 20 March 2015, the CBSA found that the GOC had influenced the Chinese PV modules or panels industry through the following mechanisms:

- direct control of the domestic selling prices for PV modules or panels;
- significant influence in the industries that provide key inputs for PV modules or panels;
- regulation of electricity prices for the purchase of solar and other renewable power generation systems; and
- benefits received by various renewable energy projects from the GOC including financial incentives, national funding, preferential loans and preferential taxes.

The CBSA subsequently affirmed these findings in a final report published on 18 June 2015.

The Commission is aware that the test applied in the CBSA's investigation is different from that applied by the Commission in its assessment of whether a particular market situation exists. However, the Commission holds that many considerations identified in the CBSA's investigation are also relevant to the Commission's assessment of whether a particular market situation existed in the Chinese crystalline silicon photovoltaic industry (Chinese PV industry) during the investigation period.

To enable the Commission sufficient time to investigate Tindo's claims, the Commissioner sought and received an extension of time to complete the Final Report into alleged dumping of Chinese PV modules or panels from the Parliamentary Secretary to the Minister for Industry and Science.

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<sup>45</sup> Canadian Border Service Agency (CBSA) 20 March 2015. Statement of Reasons: Concerning the final determinations with respect to the dumping and subsidising of Certain Photovoltaic Modules and Laminates Originating in or Exported from the People's Republic of China.

The Commission engaged an external consultant, Law and Economics Consulting Associates Ltd (LECA), to independently gather relevant information regarding the production and sale of PV modules or panels, and major raw materials (cells, wafers, ingots and polysilicon) used in the manufacturing of PV modules or panels in China. LECA provided its report to the Commission on 15 July 2015. A Public Record version of the report is on the Commission website.

### **1.1 Australian legislation, policy and practice**

The *Customs Act 1901* (the Act) does not provide any definition of particular circumstances or factors which would satisfy the Minister<sup>46</sup> that a particular market situation exists. The World Trade Organization (WTO) *Anti-Dumping Agreement* is similarly silent in relation to the definition of the concept of a 'particular market situation' referred to within Article 2.2.

In relation to determining whether a particular market situation exists, the Commission's *Dumping and Subsidy Manual*<sup>47</sup> states:

*'Sales that would otherwise be relevant for determination of normal value may be unsuitable because the price does not reflect a fair price in normal market conditions. The legislation does not define market situations that would render domestic sales as unsuitable. The investigation and analysis of each case must fully set out the reasons for the unsuitability of sales before determining normal value under succeeding provisions of section 269TAC of the Act.'*

*'In considering whether sales are not suitable for use in determining a normal value under Section 269TAC(1) of the Act because of the situation in the market of the country of export, the Commission may have regard to factors such as:*

- *whether the prices are artificially low; or*
- *whether there are other conditions in the market which render sales in that market not suitable for use in determining prices under s. 269TAC(1) of the Act.*

*'Government influence on prices or costs could be one cause of 'artificially low pricing'. Government influence means influence from any level of government'.*

*'In investigating whether a market situation exists due to government influence, the Commission will seek to determine whether the impact of the government's involvement in the domestic market has materially distorted competitive conditions. A finding that competitive conditions have been materially distorted may give rise to a finding that domestic prices are artificially low or not substantially the same as they would be if they were determined in a competitive market.'*<sup>48</sup>

The Commission considers that the analysis of a particular market situation can involve the consideration of all relevant market variables in relation to the subject good in totality and that the term 'a situation' for the purposes of this report defies precise definition. The Commission holds that 'a situation' refers to the presence of a factor or composite factors

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<sup>46</sup> In this case, the Parliamentary Secretary to the Minister for Industry and Science.

<sup>47</sup> [www.adcommission.gov.au/accessadsystem/Documents/DumpingandSubsidyManual-December2013\\_001.pdf](http://www.adcommission.gov.au/accessadsystem/Documents/DumpingandSubsidyManual-December2013_001.pdf)

<sup>48</sup> Dumping and Subsidy Manual, pp 33-34.

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which collectively operate to cause a degree of distortion in the market that renders arm's-length transactions in the ordinary course of trade in that market unsuitable for use in determining normal values.

More specifically, the Commission considers that a particular market situation assessment involves an examination of factors which may affect the interaction of supply and demand in a sector, industry or market, to the extent that prices and costs in that market can no longer be viewed as being established under normal market principles.

In assessing a particular market situation the Commission considers that governments can directly or indirectly influence domestic prices through the imposition of restrictions on how prices are charged for a product. This influence can be through:

- direct price regulation (floor or ceiling pricing mechanisms); and
- 1. indirect influence through policies that impact on the supply of the subject goods or the supply or price of major inputs used in the production of the subject goods.

The influence of government does not, in itself, establish the existence of a particular market situation. In assessing whether a market situation exists, the Commission needs to examine both:

- 1. the effect such influence has on the market; and
- 2. the extent to which domestic prices are distorted and unsuitable for proper comparison with corresponding export prices.

The Commission considers that, in the context of this analysis, evidence of government policies and programs that confer benefits which specifically or indirectly flow to the relevant market under consideration may have an effect on domestic commerce with respect to the goods. The Commission holds that this information is relevant to the analysis of whether factors exist which can be characterised as a particular market situation for the purposes of s.269TAC(2)(a)(ii).

Consideration of whether a situation exists in the relevant market is concerned with the operation of policies and regulations (whether overt or implied) and their potential impact on the suitability of domestic selling prices for normal value purposes. Accordingly, the question to be answered is whether the relevant policies operate in a manner which:

- a) leads to a distortion of competitive market conditions in relation to the subject goods such that domestic sales are unsuitable for the purposes of determining normal value; and
- b) affects the conditions of commerce related to the production or manufacture of like goods such that the records of exporters cannot be relied upon to reasonably reflect competitive market costs associated with production in accordance with the provisions of Regulation 43(2) of the *Customs (International Obligations) Regulation 2015* (the Regulations).

### 1.2 Evidentiary threshold

The Commission considers that whether or not a particular market situation exists in the domestic market of an exporting country is a matter for the Minister to decide. In doing so, the Minister ought to be satisfied on the basis of a consideration of the totality of all relevant available evidence that a market situation exists for the purposes of s.269TAC(2)(a)(ii) in so far as the evidence provides a reliable understanding of the prevailing characteristics of the market for the goods in that country.

It is considered that the assessment as to whether a market situation exists in a particular market constitutes a positive test. That is, before actual selling prices are rejected, the Commission needs to identify a market situation, and be satisfied that the particular market situation renders the sales in that market not suitable for normal value purposes.

The Commission does not consider the fact that conclusive evidence cannot be reasonably acquired requires the Minister to find in the market that a market situation does not exist. Similarly, it does not consider it reasonable to suggest that the absence of conclusive information or evidence of quantifiable market distortion precludes the ability of the Minister to be satisfied that a market situation does exist.

The Commission emphasises that consideration of the existence and operative effect of government administered benefits upon a domestic market is distinctly different to specific investigation of subsidy programs under s.269TJ.

### **1.3 China as a market economy**

Australia treats China as a market economy for anti-dumping purposes and the Commission conducts its investigation in the same manner for China as it does for other market economy members of the WTO.

Irrespective of the country the subject of the investigation, the Australian anti-dumping framework allows for rejection of domestic selling prices in market economies as the basis for normal value where there is a particular market situation making the sales unsuitable, as outlined below.

### **1.4 Information relied upon**

Following the Commission being granted an extension of time to investigate Tindo's market situation claims, the Commission provided the GOC with a Government Questionnaire. The GOC wrote to the Commissioner on 21 May 2015 and on 2 June 2015 expressing its concerns about the extension and the Commission's investigation of the market situation claims. The GOC subsequently declined to submit a response to the Government Questionnaire.

The lack of co-operation by the GOC meant that the Commission's assessment of the impact of the GOC's influence on the Chinese crystalline silicon photovoltaic module or panel industry (Chinese PV Industry) was based on information obtained from other sources. It also meant that the Commission had to make certain assumptions about the impact of GOC influence on the basis of the available evidence, as opposed to citing definitive evidence. Similarly, when assessing the influence of GOC's planning and policy directives on the Chinese PV Industry, the Commission estimated their collective impact, as opposed to assessing the impact of individual measures.

The various sources of information relied upon by the Commission include:

- Tindo's submission;
- an assessment of the market situation factors in the Chinese PV modules or panels industry prepared by Dr George Barker of LECA;<sup>49</sup>

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<sup>49</sup> Law and Economics Consulting Associates Ltd, 'Assessment of the Market Situation factors in the People's Republic of China for crystalline silicon photovoltaic modules or panels', July 2015.

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- the CBSA's Final Report<sup>50</sup> of its investigation into certain photovoltaic modules and laminates originating in or exported from China; and
- information obtained through the Commission's own research and analysis (as cited in this report and listed in the bibliography).

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<sup>50</sup> Canadian Boarder Service Agency (CBSA). June 2015. Final Report. Concerning the final determinations with respect to the dumping and subsidising of Certain Photovoltaic Modules and Laminates Originating in or Exported From the People's Republic of China.

## 2 ASSESSMENT OF MARKET SITUATION FOR PV MODULES OR PANELS

### 2.1 Market Conditions in the Chinese PV Industry

It is the Commission's view that during the investigation period there was a significant excess of production capacity and excess supply of PV modules or panels in China. The Commission holds that these surpluses caused the depression of price to a level below what the Commission considered would have prevailed in normal market conditions during the investigation period.

The Commission considers that the state of the Chinese PV Industry, outlined above, is well documented. For example, Deutch and Steinfeld noted that during 2010-11 the state of the Chinese PV Industry was characterised by the over-expansion of production capacity, which, when combined with dampening of subsidised demand mainly from Europe, resulted in an oversupply of product, a collapse in PV prices (in contrast to cost), and massive financial losses for Chinese companies.<sup>51</sup>

The state of the Chinese PV Industry during the investigation period was also reflected in the following GOC related sources.

- In December 2012, the State Council, when commenting on the Chinese PV industry, noted that the main problems at that time were severe overcapacity, over-reliance on external demand, and operating difficulties.<sup>52</sup>
- In July 2013, a GOC directive for the Chinese PV industry, noted that the industry was in a "dire a condition due to such severe problems as serious redundancy in production capacity, disorder in competition on the market, over-dependence on export markets, and inadequate development of the domestic market".<sup>53</sup>

It is the Commission's view that the state of the Chinese PV Industry was caused by a combination of over-investment in production capacity, excess supply of modules and panels and a weakening in demand for exports. The Commission holds that while the weakness in demand for Chinese exports of PV modules or panels was due to external factors, namely weakening demand from the European Union, the GOC planning and policy directives directly contributed to over-investment in production capacity and the excess supply of PV modules or panels.

Consequently, it is the Commission's assessment that the GOC's planning and policy directives significantly influenced prices for Chinese PV modules or panels, during the investigation period, to a level below what the Commission considered would have prevailed in normal market conditions.

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<sup>51</sup> Deutch. J. and Steinfeld. E. 2013. A Duel in the Sun. The Solar Photovoltaics Technology Conflict between China and the United States: A Report for the MIT Future of Solar Energy Study. <http://mitei.mit.edu/publications/reports/-studies/future-solar>

<sup>52</sup> Hejun, Le. 2015. China's New Energy Revolution. How the World Power is Fostering Economic Development and Sustainable Growth through Thin Film Solar Technology. 1<sup>st</sup> Edition. McGraw Hill Education LLC. United States of America. p187.

<sup>53</sup> Several Opinions of the State Council on Promoting the Healthy Development of Photovoltaic Industry. 2013. Article 1.

## **2.2 Assessment of GOC Directives and Programs**

It is the Commission's view that the key instruments through which the GOC contributed to the distortion of the Chinese PV Industry are listed below:

- 12<sup>th</sup> Five-Year Plan for National Economic and Social Development;
- 12<sup>th</sup> Five year Plan for the Solar Photovoltaic Industry;
- Programs supporting investment in PV solar power generation capacity; and
- GOC assistance to upstream raw material manufacturers, namely producers of crystalline silicon and crystalline silicon photovoltaic cells (PV cells).

Section 3 of this appendix provides further details of the key GOC directives which the Commission has relied upon in its analysis. The following summaries are focused on the sections of the directives which are relevant to the to the Chinese PV Industry.

### **2.2.1 12<sup>th</sup> Five Year Plan for National Economic and Social Development**

The Commission considers that while the 12<sup>th</sup> Five-Year Plan for National Economic and Social Development (the FYP-NESD (12<sup>th</sup>))<sup>54</sup> maybe aspirational in nature, it provides guidance to all levels of the Chinese Government as to which industries, enterprises and products are to be supported through government assistance. One example of the significance of this document is demonstrated through its stated purpose of being a blueprint for the economic and social development of China over the specified period, and hence acts as “a key driver of the Government of China economic regulation, market supervision, social administration and public service”.<sup>55</sup>

The Commission considers that the relationship between the GOC directives and market interventions has also been established and sufficiently documented through previous investigations by the Commission. For example, during its investigations into aluminium extrusions from China<sup>56</sup>, the Commission<sup>57</sup> undertook verification meetings with the GOC. During these meetings, the GOC's National Development and Reform Commission of the People's Republic of China (NDRC) was queried about the GOC's Five Year Plans. This discussion was summarised in the Commission's 'Government of the Peoples Republic of China Visit Report', February 2010, which observed:

- the NDRC stated that the GOC's FYP is (the) the most important plan of China, like a blueprint for the next five years of development of the country. The NDRC noted that the national FYPs are the leading document in planning the economy and social development of China.
- the NDRC also noted that implementation of the objectives of the FYPs is at the GOC agency level, whereby each area will release specific policies and regulations (i.e. each responsible area develops and implements its own policies to implement the FYPs).<sup>58</sup>

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<sup>54</sup> National People's Congress. March 2011. Resolution of the National People's Congress on the Outline of the Twelfth Five-Year Plan for National Economic and Social Development. Effective as at 14 March 2011.

<sup>55</sup> State Council. 2011. 12<sup>th</sup> Five-Year Plan for National Economic and Social Development. Chapter 3 'Main Objectives'.

<sup>56</sup> Customs and Boarder Protection Service. April 2010. Dumping and Countervailing Investigation 148 - Aluminium Extrusions Exported from China.

<sup>57</sup> When the anti-dumping function was undertaken by the Australian Customs and Border Protection Service (ABF).

<sup>58</sup> ABF Government of the People's Republic of China Visit Report, February 2010, p39.



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Additionally, during the same verification visit, the China State Reserve Bureau stated that the 11<sup>th</sup> National Five Year Plan was a legally binding document.<sup>59</sup>

It is the Commission's view that the significance of the FYP-NESD (12<sup>th</sup>) in the targeted provision of assistance to the Chinese PV Industry is also reflected by the GOC's 'Catalogue for Guiding Industry Restructuring (Version 2011)' (Industry Catalogue).<sup>60</sup>

It is the Commission's view that the Industry Catalogue provides the basis on which government assistance and regulation is applied to specified industries and projects. More specifically, the Industry Catalogue identifies industries and projects which are to be 'encouraged' under the FYP-NESD (12<sup>th</sup>) and details the types of GOC mandated assistance to be provided to these 'encouraged' industries and projects. For example, it notes that mandated support, to be provided to 'encouraged' industries includes support by providing 'credit loans' at lower interest rates from financial institutions and the exemption of equipment imported for encouraged projects from customs duties and import value-added taxes.

The provision of assistance through the FYP-NESD (12<sup>th</sup>) was also identified by the 2013-14 European Commission (EC) subsidy investigation into the Chinese Solar Glass Industry.<sup>61</sup> In the context of the GOC's five year plan the EC noted that Article 34 of the Banking Law "requires banks in the People's Republic of China to carry out their loan business according to the needs of the national economy and that the needs of the national economy are laid down in the 12th Five year plan."<sup>62</sup> The EC investigation also noted that Decision No. 40 of the State Council on Promulgating and Implementing the 'Temporary Provision on Promoting the Industrial Structure Adjustment':<sup>63</sup>

- "States that the GOC will actively support the development of new energy industries and expedite the development of solar energy".<sup>64</sup>
- "Instructs all financial institutions to provide credit support only to encouraged projects and promises the implementation of other preferential policies on the encouraged projects".<sup>65 66</sup>
- "Provides guidance to all financial institution in the form of binding instructions on the promotion and support of encouraged industries".<sup>67</sup>

In establishing the relevance of the FYP-NESD (12<sup>th</sup>) and Industry Catalogue to the Chinese PV Industry, the FYP-NESD (12<sup>th</sup>) identifies 'new energy', which includes solar power, as one of the seven strategic emerging industries which are mandated to receive government subsidies and other forms of support. The Industry Catalogue also designates the following industries as being 'encouraged' industries:

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<sup>59</sup> ABF Government of the People's Republic of China Visit Report, February 2010, p49.

<sup>60</sup> State Development and Reform Commission. March 2011. Catalogue for Guiding Industry Restructuring (2011 Version). Order no. 9 of the National Development and Reform Commission.

<sup>61</sup> European Commission, May 2014. COMMISSION IMPLEMENTING REGULATION (EU) NO 471/2014. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0471&from=EN>

<sup>62</sup> Commission Implementing Regulation (EU) No. 471/2014. Citation (79).

<sup>63</sup> The State Council. 2005. Decision of the State Council on Promulgating and Implementing the "Temporary Revisions on Promoting Industrial Structure Adjustment. <http://www.asianlii.org/cn/legis/cen/laws/tpopisa783/>

<sup>64</sup> Temporary Provisions on Promoting the Industrial Structure Adjustment. Chapter II, Article 5

<sup>65</sup> Commission Implementing Regulation (EU) No. 471/2014. Citation (49).

<sup>66</sup> Temporary Provisions on Promoting the Industrial Structure Adjustment. Chapter III, Article 17.

<sup>67</sup> Commission Implementing Regulation (EU) No. 471/2014. Citation (84).

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- concentrated solar power systems, solar photovoltaic power generation system integration technology development and application, inverter control systems;<sup>68</sup>
- building-integrated photovoltaics (BIPV) design and manufacturing;<sup>69</sup>
- all kinds of crystalline silicon and thin-film solar photovoltaic cell production equipment;<sup>70</sup>
- advanced various types of solar photovoltaic cells and high-purity crystalline silicon material;
- solar thermal and photovoltaic applications integration architecture;<sup>71</sup> and
- semiconductor lighting, photovoltaic solar energy equipment, chip components to equipment, new power battery equipment, surface mount devices (including stencil printers, automatic placement machine, lead-free reflow, photoelectric tester) etc.<sup>72</sup>

In discussing the various forms of assistance provided to solar PV industries in the United States and China, Deutch and Steinfeld noted that quasi-public investment corporations had been one of the most important sources of financial support for ‘encouraged’ industries within China. The authors noted that these entities had been established by virtually every province and municipal government to act as bond issuing entities that extend preferential credits to local manufacturers, including PV module or panel producers. The authors also noted that extensive support in the form of tax breaks, access to low-cost or free land and sometimes direct grants, had been provided to cell and module manufacturers by provincial and municipal governments.<sup>73</sup>

The measures identified by Deutch and Steinfeld are also noted in the analysis of the FYP-NESD (12<sup>th</sup>) prepared by Wiley Rein LLP on behalf of the Coalition for American Solar Manufacturing.<sup>74</sup> The analysis notes that new energy, including solar, as one of China’s seven priority industries, which received significant subsidies including cash grants and preferential tax, fiscal, and procurement policies.<sup>75</sup> The analysis also identified a number of directives targeted at strategic industries, which includes the Chinese PV Industry:

- ‘Set up special funds for the development of new strategic industries and industrial investment’;
- ‘Make comprehensive use of financial preferential policies, such as risk compensation, and encourage financial institutions to strengthen credit support’;
- ‘Guide tax support policies for investment and consumption in the solar industry’;

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<sup>68</sup> Catalogue for Guiding Industry Restructuring (Version 2011). Sub-section 5.1.

<sup>69</sup> Catalogue for Guiding Industry Restructuring (Version 2011). Sub-section 5.3.

<sup>70</sup> Catalogue for Guiding Industry Restructuring (Version 2011). Sub-section 14.23.

<sup>71</sup> Catalogue for Guiding Industry Restructuring (Version 2011). Sub-section 21.5.

<sup>72</sup> Catalogue for Guiding Industry Restructuring (Version 2011). Sub-section 28.25.

<sup>73</sup> Deutch and Steinfeld, 2013, p4.

<sup>74</sup> Wiley Rein LLP. May 2012. Summary of China’s 12<sup>th</sup> Five-Year Plans Relating to the Solar Industry. <http://www.americansolarmanufacturing.org/news-releases/chinas-five-year-plan-for-solar-analysis.pdf>

<sup>75</sup> Wiley Rein LLP. May 2012. p1.

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LECA also cited Section 3 of Chapter 10 of the FYP-NESD (12<sup>th</sup>) as evidence of the use of industry development and investment funds, social funds, start up investment, multi-level capital market financing, financial incentives, risk compensation, credit support, tax support policies, and beneficial technical and industry standards to provide support to emerging industries, including solar PV Industry.<sup>76</sup> Preferential financing and taxation arrangements were also afforded to the Chinese PV Industry under Article 25 and Article 26 of the Renewable Energy Law of the People's Republic of China.

Further evidence of the financial support provided by the GOC to the Chinese producers of PV modules or panels to two selected exporters was obtained from the Form 20-F that was submitted to the United States Securities and Exchange.<sup>77</sup> The GOC support provided to these exporters is set out below.

- In the 'Summary of Principal Accounting Policies' section of Trina Solar Limited 2013 Form 20-F Report, it states that the company received government grants for assets of USD 2,315,542, USD 4,8737,756 and USD 2,817,719 during the years ending 31 December 2011, 2012 and 2013, respectively. The summary also stated that unrestricted cash government subsidies were USD 8,045,834, USD 1,002,024 and USD 5,380,114 during the same periods, respectively.<sup>78</sup>
- In the 'Summary of Principal Accounting Policies' section for Renesola Ltd 2013 Form 20-F Report stated that the company recorded USD 4,305,347, USD 4,287,891 and USD 4,297,693 of government grants as other operating income for the years ending 31 December 2011, 2012 and 2013, respectively. The Company received government grants related to property, plant and equipment and land use right as of 31 December 2012 and 2013 were USD 27,311,528 and USD 44,150,492 respectively, included in deferred subsidies and other in the consolidated balance sheets.<sup>79</sup>

### 2.2.2 12<sup>th</sup> Five Year Plan for the Solar Photovoltaic Industry (FYP-SPVI (12<sup>th</sup>))

The Commission holds that the 12<sup>th</sup> Five Year Plan for the Solar Photovoltaic Industry (the FYP-SPVI (12<sup>th</sup>))<sup>80</sup> refines and promulgates the directives contained within the FYP-NESD (12<sup>th</sup>). Areas where the GOC sought to influence both the type and coordination of support to the Chinese PV Industry through the FYP-SPVI (12<sup>th</sup>) are set out below:<sup>81</sup>

- Strengthening strategic industrial development through implementing relevant planning on industrial transformation, upgrading and renewable energy;
- Mapping out policies in areas of industry, taxation and finance to promote the healthy development of China's PV Industry;
- Directing overall planning and promote reasonable industrial layout through

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<sup>76</sup> Law and Economic Consulting Associates. 2015. p27.

<sup>77</sup> F-20 forms are issued by the Securities and Exchange Commission and must be submitted by all 'foreign private issuers' that have listed equity shares on the exchange in the United States. The goal of Form 20-F is to standardise the reporting requirements of foreign based companies so that investors can evaluate these investors alongside domestic equities.

<sup>78</sup> United States Securities And Exchange Commission, Trina Solar Ltd, Form 20-F, 2013, (pF-23).

<sup>79</sup> United States Securities And Exchange Commission, Renesola Ltd, Form 20-F, 2013, (pF-20).

<sup>80</sup> Ministry of Industry and Information Technology. February 2012. 12<sup>th</sup> Five-Year Plan for the Solar Photovoltaic Industry. Effective as at 24 February 2012.

<sup>81</sup> 12<sup>th</sup> Five-year Plan for the Solar Photovoltaic Industry. Section VI.

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- promoting industrial transformation and upgrading;
- To continue to implement the ‘Golden Sun Project’ and other supporting measures, accelerate the development of the domestic PV market; and
- Insist on a combination of grid-connected power generation and off-grid application and to achieve these objectives through the use of tariffs, moderate financial subsidies, and active financial support, actively expand the domestic PV market.

The Commission considers that the significance of the FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>) is also reflected in the GOC’s ‘Several Opinions of the State Council on Promoting the Healthy Development of the Photovoltaic Industry.’<sup>82</sup> While this directive was released toward the end of the investigation period, the Commission considers that it provides a further example of the intent of the FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>) and demonstrates that while the GOC’s directives are flexible with regard to local requirements, they must be adhered to by the implementing bodies:

- Article 5 states that the “Proper connection and coordination between national plans and local plans’ and that the ‘photovoltaic manufacturing and industrial application, photovoltaic power generation and development of corresponding power grids must be ensured’;<sup>83</sup> and
- Article 8, titled ‘enhance organisation and leadership of the industry’ states that:<sup>84</sup>
  - “All Departments concerned shall, in accordance with these Opinions, formulate their respective support documents for the industry according to their respective duties on an early date, improve support policies on the pricing and taxation as well as credit and land supply to photovoltaic power generation, and ensure that all measures are properly carried out”;
  - “All provisional people’s governments shall, based on actual situation enhance their administration of the photovoltaic industry within their respective jurisdictions, and formulate detailed plans and properly implement relevant policies so as to guide the orderly and coordinated development of the industry”.

The Commission considers that while this directive was released toward the end of the investigation period, it demonstrates the GOC’s intent to direct provisional governments on issues such as pricing policies, taxation, credit provision and land supply, in a manner consistent with the FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>).

This intent is also reflected in Section (3) ‘Key Tasks’ of the GOC’s 12<sup>th</sup> Five-Year Plan on Solar Power Development (FYP-SPD (12<sup>th</sup>)).<sup>85</sup> Amongst other key tasks, the plan notes ‘promoting the healthy development of the photovoltaic manufacturing’ which is then further articulated as: expanding the domestic PV products market; promoting the structure optimisation of the PV Industry; encouraging enterprise merger and reorganisation according to market rules; and closing down outdated production facilities.

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<sup>82</sup> State Council. July 2013. Several Opinions of the State Council on Promoting the Healthy Development of Photovoltaic Industry. Document no. Guo Fa (2013) No.24. Effective as at 04 July 2013.

<sup>83</sup> Several Opinions of the State Council on Promoting the Healthy Development of the Photovoltaic Industry. Article 5. Section 5(1).

<sup>84</sup> Several Opinions of the State Council on Promoting the Healthy Development of the Photovoltaic Industry. Article 8.

<sup>85</sup> National Energy Administration. September 2012. 12<sup>th</sup> Five-Year Plan on Solar Power Development. Document No. guonenaxinneng (2012) No.194. Effective as at 24 February 2012.

LECA notes that the State Council is the chief administrative authority of the People's Republic of China, constitutionally synonymous with the Central People's Government, particularly in relation to local governments. More specifically the State Council is entrusted with the implementation of government policies and daily administration. This institution is constituted by the State's ministries and commissions and layers of the 'people's governments' below the national level. Dr Barker of LECA in his report also noted that the State Council directly oversees the various subordinate People's Governments in the provinces.<sup>86</sup> The Commission considers that these observations indicate the significance and relevance of the FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>) in considering whether there are distortions in the Chinese PV Industry.

### **2.2.2.1 Summary of Impact**

It is the Commission's assessment that the goals and directives set out in the GOC's FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>) afforded the Chinese PV Industry significant direct and indirect support during the investigation period. The Commission considers that this assistance was targeted at both supporting the industry's growth and restructuring to better manage the supply, cost and quality of PV modules or panels being produced.

It is the Commission's assessment that the primary instruments through which assistance was provided during the investigation, under the directives of the FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>), was through preferential financial arrangements; preferential access to land; and preferential taxation arrangements. The Commission's assessment is that while these types of assistance were provided to the Chinese PV Industry, the exact form of assistance varied significantly depending on the instrument used and the individual provincial and municipality body responsible for providing the assistance.

One channel through which the GOC assistance distorted the state of the Chinese PV Industry during the investigation period was by reducing the financial barriers firms faced to entering the PV Industry and to expanding production capacity. These barriers included costs associated with accessing land and manufacturing facilities and purchasing capital equipment such as machinery. By providing Chinese PV Industry participants with preferential access to land and financing, the GOC assistance significantly reduced these barriers. In addition, the provision of preferential access to financing, preferential tax arrangements and cash grants is likely to have provided significant financial incentives for Chinese producers of PV modules or panels to enter the industry and expand capacity.

Further, the assistance provided by the GOC is likely to have distorted the cost structures of Chinese producers, which in turn distorted their response to declining prices for PV modules or panels during the investigation period. While the reduced costs outlined above were likely to have resulted in increased profitability and increased supply, it is also likely that when prices began to fall, supply did not contract as quickly as would have been the case if this assistance was not being provided.

It is the Commission's assessment that without this contraction in supply, the market was not able to correct itself as would be expected under normal market operations and the price of PV modules or panels in China remained depressed.

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<sup>86</sup> Law and Economic Consulting Associates. 2015. p23

The Commission considers that this situation was compounded because of the broad number of mechanisms being used by the different levels of government which made it difficult to co-ordinate the scaling back of assistance as the extent of the excess production capacity and supply became apparent. This in turn resulted in the continued depression of prices during the investigation period to a level below what the Commission considered would have prevailed in normal market conditions.

In addition to the assistance provided under the FYP-NESD (12<sup>th</sup>) and FYP-SPVI (12<sup>th</sup>), the GOC had also targeted which manufacturers received assistance by specifying restriction of production capacity and certain production costs. It is the Commission's assessment that while these policy directives will help to stabilise the Chinese PV Industry over the medium term, it added a further level of distortion to industry during the investigation period, relative to what would have prevailed under competitive market conditions.

### **2.2.3 Programs supporting investment in PV solar power generation capacity**

The Commission considers that during the investigation period, the GOC used a number of programs and regulatory instruments to influence demand for PV modules or panels within China through stimulating the solar power generation industry. For example, Section (3) of the GOC's FYP-SPD (12<sup>th</sup>) identified a number of key tasks to be achieved over the 12<sup>th</sup> five year period. These tasks included promoting the construction of solar power plants and distributed solar PV power generation. Key GOC instruments identified by the Commission included capital subsidies provided through the Golden Sun Program and Rooftop Subsidy Program and preferential feed-in-tariff (FIT) rates provided through the NDRC's Feed-in-Tariff Law (FIT (PV)).<sup>87</sup> The FIT (PV) was initially announced by the NDRC in July 2011. The FIT (PV) supports investment in PV power generation by off-setting some of the additional expenses faced by PV power generators when compared to power generation from other sources such as coal.

The Golden Sun Program was initiated in July 2009, extended to cover the period 2011-2015, then terminated in early 2013.<sup>88</sup> Significant elements of this program included the provision of financial assistance to support the construction of solar PV power plants and development of and industrialization of key PV technologies including silicon purification, control inverters, and other key network technologies.<sup>89</sup> For example, the program provided a 50 per cent subsidy on total investment in solar PV power generation system and associated transmission and distribution projects. The program also provided a 70 per cent subsidy on total investment in independent PV power generation systems in remote areas of the country that have no access to electricity supply.<sup>90</sup>

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<sup>87</sup> Xu, H., Dou, C., Wang, S., Lv, F. August 2012. China National Photovoltaics Status Report, Co-Operative Program on Photovoltaic Power System, International Energy Agency.

<sup>88</sup> Program sponsors included the Ministry of Finance, National Energy Agency and the Ministry of Science and Technology.

<sup>89</sup> Notice concerning the Implementation of the Golden Sun Demonstration Project. Chapter 2, Article 4.

<sup>90</sup> *ibid.* Chapter 2, Article 7.

The Rooftop Subsidy Program was initiated in March 2009.<sup>91</sup> A key objective of this subsidy program was to promote the use of building integrated PV (BIPV) applications and rooftop systems. To receive the subsidy, eligible PV projects have to meet several requirements. Examples of these requirements included that installed capacity should exceed power output of 50kW and that the generation efficiency of mono-silicon and poly-silicon PV products, and amorphous silicon PV products should exceed 16 per cent, 14 per cent, and six per cent respectively.

### **2.2.3.1 Summary of Impact**

It is the Commission's assessment that these instruments (FIT (PV), Golden Sun Program, Rooftop Subsidy Program) stimulated the demand for PV modules or panels and, on the basis of expectations about future demand for PV modules or panels, led to increased investment in production capacity and supply during the investigation period. It is the Commission's assessment that by providing incentives to increase investment in the Chinese PV Industry, and the supply of PV modules or panels, these instruments also contributed to the influencing of prices to a level below what the Commission considered would have prevailed in normal market conditions. With regard to demand for PV modules or panels, it is the Commission's assessment that all three of these instruments supported increased investment in PV power generation capacity, of which PV modules or panels are a critical component.

The subsidies provided under the Golden Sun Project and the Rooftop Subsidy Program effectively reduced the amount of financial capital required from investors to fund PV generation projects. By reducing the amount of financial capital required to establish a project, these programs improved the forecast profitability and anticipated return on investment, and reduced the perceived financial risk associated with proposed projects. It is the Commission's assessment that by improving the perceived profitability of projects and reducing their perceived risk, these programs provided incentives for increased investment in solar PV generation projects and hence demand for PV modules or panels.

While the FIT (PV) used a different mechanism to encourage investment in PV generation capacity, the effect on investment was similar to that of the Golden Sun Project and Rooftop Subsidy Program. FITs guarantee payments to generators of electricity produced from PV solar sources at a certain rate. It is the Commission's assessment that by compensating solar PV power generators for the higher generation costs, the FIT (PV) had the effect, similar to a subsidy program, of improving the expected profitability and return on capital for PV generation projects. It is the Commission's assessment that by specifying tariff rates, this policy provided greater certainty around expected revenue and profitability and hence reduced the financial and regulatory risk associated with the projects. The Commission holds that as with the Golden Sun Project and Rooftop Subsidy Program, the effect of this policy instrument was to encourage the investment in solar PV generation capacity and increased demand for PV modules or panels.

It is the Commission's assessment that while the GOC's Golden Sun Project, Rooftop Subsidy Program, and FIT (PV) had a positive effect on demand for Chinese PV modules

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<sup>91</sup> The program was sponsored by the Ministry of Finance and the Ministry of Urban and Rural Development.

or panels during the investigation period, these programs also created incentives for the expansion of PV modules or panels production, increasing capacity and supply. Based on this analysis, it is the Commission's assessment that these GOC programs significantly influenced prices to a degree that makes them unsuitable for the calculation of normal values.

#### **2.2.4 Government of China assistance provided to upstream manufacturers**

It is the Commission's view that the GOC planning and policy directives also targeted industries supplying key inputs into the production of PV modules or panels. The Commission considers that by distorting the price of key inputs (polysilicon wafers and cells) in the production of PV modules or panels, these directives also had a significant effect on distorting market conditions in the Chinese PV Industry and influenced prices to a level below what the Commission considered would have prevailed in normal market conditions.

The Commission considers that while these interventions targeted every level of the upstream supply chain, they were most prominent in the crystalline silicon and PV cells industries. Examples of the GOC's interventions in the manufacturing of PV cells are:

- the designation of building materials, including the production of technology development of high quality artificial crystalline materials for use in new energy as an 'encouraged' industry within the Industry Catalogue;<sup>92</sup>
- directives for upstream manufacturing included in the FYP-NESD (12<sup>th</sup>), which included a 30 per cent reduction in poly-silicon production costs, 50 per cent local content requirements for material, the domestic manufacturing of all equipment for silicon cell production and the ability of the domestic industry to provide 'turn-key' silicon cell production line with self-owned intellectual property;<sup>93</sup> and
- directives for upstream manufacturing included in the FYP-SPVI (12<sup>th</sup>), which included promoting the mass production of high-purity silicon materials, enhancement of cell conversion efficiency rates, localisation of production equipment manufacturing, R&D of new types of cells and raw materials, and system integration with the aim to reduce costs of PV power generation.<sup>94</sup>

##### **2.2.4.1 Summary of Impact**

It is the Commission's assessment that while in general these measures would reduce the cost of inputs used in the production of PV modules or panels, the degree of pass through from the raw material input to the production costs for PV modules or panels depends on multiple factors. Examples of these factors include whether PV module or panel manufacturers are integrated with the upstream manufacture of those inputs, and the relative bargaining power between PV module or panel producers and suppliers of inputs.

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<sup>92</sup> Catalogue for Guiding Industry Restructuring (2011 Version). Section XII 'Building Materials'.

<sup>93</sup> Xu, H., Dou, C., Wang, S., Lv, F. August 2012. China National Photovoltaics Status Report, Co-Operative Program on Photovoltaic Power System, International Energy Agency.

<sup>94</sup> 12<sup>th</sup> Five-year Plan for the Solar Photovoltaic Industry. Section III (b).



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While the Commission is unable to assess the degree to which costs have passed through, it is the Commission's assessment that the GOC's intervention in these industries are of a scales which significantly influenced the price for Chinese PV modules or panels to a level which makes them unsuitable for the calculation of normal values.

The Commission's assessment of the distortionary impacts of the GOC in the interventions in the upstream input markets was confirmed by the report prepared by Dr Barker of LECA. The report notes that:

“the impact of interventions in the polysilicon market would have flowed downstream to affect PV cell prices and PV modules or panels prices. This is particularly significant for those exporters who manufactured their own cells, rather than bought them. There would have been 100 per cent flow on from any reduction in upstream polysilicon prices to exporters who manufactured their own cells, rather than bought them, significantly reducing their costs of manufacturing PV cells. This implies that the cost of manufacturing photovoltaic modules or panels recorded in the accounts of domestic manufactures in China cannot be relied on as competitive market costs. These records therefore cannot be used to estimate a competitive market cost of making photovoltaic modules or panels”.<sup>95</sup>

One of the four selected exporters that self-produced the PV cells to manufacture PV modules or panels provided data for its purchases of polysilicon used in the production of PV cells. The Commission noted that while this exporter purchased some polysilicon from the domestic Chinese producers, the majority of the polysilicon was imported. The Commission also noted that the cost of PV cells that were purchased domestically were significantly higher than the self-produced PV cells. However, the data provided by this exporter was not considered to be reliable as the prices were in different currencies; when converted to a common currency for comparison, the prices didn't make sense. It seems that while different currencies were used, some prices were indicated as being in Euro or USD when they were actually in RMB. The data was not verified by the Commission.

Given that the Commission was not able to use the data provided by this exporter, and given the mix of imported, self-produced and domestically purchased major raw materials (polysilicon, wafers and PV cells) the costs reflected in the accounts of this exporter do not reflect market competitive costs.

Other selected exporters did not provide detailed cost data for their purchases of polysilicon and wafers to enable the Commission to undertake further analysis.

### 2.3 Conclusion

Based on the analysis presented in this Report, the Commission has found that there were significant interventions by the GOC such that they have influenced the supply of PV modules or panels, demand for PV modules or panels and the industries supplying raw material inputs (polysilicon, wafers and cells) into the production of PV modules or panels.

It is the Commission's assessment that these interventions therefore distorted domestic prices for PV modules or panels in China during the investigation period to a degree that makes them unsuitable for the calculation of normal values.

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<sup>95</sup> Law and Economic Consulting Associates, 2015, p6.

### **3 CHINESE GOVERNMENT PLANNING AND POLICY DIRECTIVES**

#### **3.1 12<sup>th</sup> Five Year Plan for National Economic and Social Development**

##### **3.1.1 Indicators of the influence of the FYP-NESD (12<sup>th</sup>) on GOC planning and policy directives**

Outline of the Twelfth Five-Year Plan for National Economic and Social Development.

- The Outline of the Twelfth Five Year Plan (2011-2015) for National Economic and Social Development of the People's Republic of China is formulated in accordance with the Proposal of the Central Committee of the Communist Part of China on Formulating the Twelfth Five-year Plan for National Economic and Social Development, with the main aim to state the strategic intention of the nation, specify the working emphasis of the government, and lead the acts of market players. The Plan is a grand blueprint for the economic and social development of China in the next five years, the common guideline for all the Chinese people, and the important basis for government to perform the duties of economic regulation, market supervision, social administration and public service.
- The strategic adjustment of the economic structure will remain the main direction for the acceleration of the change in economic development pattern. We will establish a long-standing mechanism that boosts domestic demand, promote the reliance on the coordination of consumption, investment and export drive economic growth, strengthen the fundamental position of agriculture, improve the core competitiveness of the manufacturing industries, develop strategic and emerging industries, speed up the development of the service industries, promote the reliance on the synergy of the primary, secondary and tertiary industries to drive economic growth, coordinate urban and rural development, actively and steadily promote urbanization, expedite the establishment of new socialist rural villages, promote the positive interaction and coordinated development of the regions.<sup>96</sup>
- To achieve major progress in structural adjustment and increase the consumption rate of residents. We will further consolidate the agricultural foundation, continue to optimize the industry structure, achieve breakthrough in the development of strategic and emerging industries, increase the ratio of added value of the service industry to the GDP by 4 per cent increase the urbanization rate by 4 per cent and further strengthen the coordination of urban and rural development.<sup>97</sup>  
In order to realise the objectives of economic and social development, we will promote scientific development, accelerate the transformation of the economic development mode, make overall plans and take all factors into consideration, push forward reform and innovation, concentrate our efforts on resolving the unbalanced, uncoordinated and unsustainable issues of economic and social development and specify clearly the major policy orientation.<sup>98</sup>

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<sup>96</sup> 12<sup>th</sup> Five-Year Plan for National Economic and Social Development. Part I, Chapter 2.

<sup>97</sup> *ibid.* Part I, Chapter 3.

<sup>98</sup> *ibid.* Part I, Chapter 4.

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- Strengthening and improving the macro-economic control measures. We will consolidate and expand the achievement in handling the impacts of the international financial crisis, combine the short-term control policies and the long-term development policies, strengthen the coordination of all types of policies, such as the financial, monetary, investment, industry and land policies, raising the scientific level and predictability of the macro-economic measures, increase the pertinence and flexibility, control the pace of economic growth in a reasonable manner, handle the relationship between the maintenance of the stable and relatively rapid economic development, the adjustment of the economic structure and the management of inflation expectations in a more active and proper manner and realise a balanced relationship between the pace, structure, quality and benefit of economic growth.<sup>99</sup>
- Adjusting and optimising investment structure. We will bring into play the important function of investment in boosting domestic demand, maintain the reasonable growth of investment, improve the investment systems and mechanisms, clearly define the investment scope of the government, regulate the investment behaviour of State owned enterprises, encourage the expansion of private investment, effectively prevent irrational expansion and repetitive construction, promote the positive interaction between investment and consumption, well combine the expansion of investment, the increase of employment and the improvement of people's livelihood, and create ultimate demand.<sup>100</sup>
- Promoting industry upgrade through technological innovation. We will target at both the domestic and international markets, bring into play the role of technology innovation in driving the optimisation and upgrade of industry structure, accelerate the establishment of the national innovation system, strengthen the leading role of enterprises in technical innovation, guide the agglomeration of innovation resources such as capital, talents and technologies in enterprises, promote the strategic alliance of production, education and research, improve the core competitiveness of industries, and promote the coordinated development of the tertiary industry at a higher level.<sup>101</sup>
- Improving the incentive and restraint mechanism for energy conservation and emission reduction. We will optimise energy structure, rationally control the total volume of energy consumption, improve the pricing formation mechanism and resource environment related taxes and fees systems for resources-dependent products, improve the laws, regulations, and standards related to energy conservation and emissions reduction, reinforce the energy conservation and emission reduction target accountability performance assessment, and implement resources conservation and environmental protection in all the fields and processes of manufacturing, circulation, consumption, and construction, and enhance the capability of sustainable development.<sup>102</sup>

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<sup>99</sup> *ibid.* Part I, Chapter 4.

<sup>100</sup> *ibid.*

<sup>101</sup> *ibid.*

<sup>102</sup> *ibid.*

### 3.1.2 Linkages between the FYP-NESD (12<sup>th</sup>) and the Chinese PV Industry

Part (III), Chapter 10 ‘Nurturing and Developing the Strategic and Emerging Industries’.

- “We will promote in-depth integration of emerging technologies and emerging industries based on major technology breakthroughs and development needs, and, on the foundation of continuing to make the high-tech industry stronger and bigger, nurture and develop strategic emerging industries into forerunner and pillar industries”.<sup>103</sup>
- **Section (1) ‘Boosting the Breakthrough Development of Key Fields’:** “Making great effort in developing strategic emerging industries such as energy saving and environmental protection, new generation information technology, biology, high end equipment manufacturing, renewable energy, new materials, and renewable energy vehicles. For the energy saving and environmental protection industry, focus will be laid on developing key technologies, equipment, products and services that are highly efficient, energy saving, advanced, environmentally friendly, and featuring recycling of resources. For the new generation information technology industry, focus will be on developing new generation mobile telecommunication, next generation internet, tri-network integration, internet of things, cloud computing, integrated circuits, new displays, high-end software, high-end servers, and information services. For the bio-industry, we will focus on developing bio-pharmaceuticals, biomedical engineering products, bio-agriculture, and bio-manufacturing. High end equipment manufacturing industry will focus on developing aeronautical equipment, satellites and applications, rail transit equipment, and intelligent manufacturing equipment; renewable energy industry will focus on developing new generation nuclear energy, solar thermal utilization and photovoltaic solar power, wind power technology equipment, intelligent power grids, and biomass energy; new materials industry will focus on developing new functional materials, advanced structural materials, high performance fibers and their compound materials and common basic materials: and renewable energy vehicle industry will focus on developing plug-in hybrid, pure electric vehicle, and fuel cell vehicle technologies. The value-added output of strategic emerging industries will aim to account for around 8 per cent of GDP”.<sup>104</sup>
- **Section (3) ‘Strengthening Policy Support and Guidance’:** “Setting up strategic emerging industry development fund and industry investment fund, increasing the government’s emerging industry startup investment, leveraging the role of multi-level capital market financing, and pushing forward investment of social funds in innovative start-ups that are at their early or intermediate stages. We will make comprehensive use of financial incentives policies such as risk compensation to encourage financial institutions to provide more credit support: improve tax support policies that encourage innovation and guide investment and consumption; accelerate the formation of technical standards for important products and industry standards that are beneficial for development of strategic emerging industries; and support the construction of support infrastructure for the application of new products to create a positive environment for cultivating and

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<sup>103</sup> 12<sup>th</sup> Five-Year Plan for National Economic and Social Development. Part III, Chapter 10.

<sup>104</sup> *ibid.*

expanding market demands”.<sup>105</sup>

Part (III), Chapter 11 ‘Pushing Forward the transformation of Energy Production and Utilization’.

- **Section (1) ‘Promoting the Development of Diversified Clean Energy’:** “We will also develop nuclear power on the basis on ensuring safety, strengthen the construction of projects that support grid integration, and develop wind power effectively, actively develop other renewable energy sources such as solar energy, biomass energy, and geothermal energy, and boost the popularization and application of distributed energy resource systems”.<sup>106</sup>

The FYP-NESD (12<sup>th</sup>) also identifies a range of measures to increase China’s production capacity and consumption of non-fossil fuels, including photovoltaic solar power. Examples of these measures include the provision of funding for start-up and investment, financial incentives, compensation for risk, credit support, tax support and beneficial technical and industry standards. The FYP-NESD (12<sup>th</sup>) also identifies specific measures to provide support to strategic emerging industries like PV Solar. These measures included: industry development and investment funds; social funds; start up investment, multi-level capital market financing; financial incentives, risk compensation; credit support; tax support policies; and beneficial technical and industry standards<sup>107</sup>.

### **3.2 Catalogue for Guiding Industry Restructuring (2011 Version)<sup>108</sup>**

The Directory Catalogue (2011) lists industries and projects within three categories: ‘encouraged’, ‘restricted’, and ‘eliminated’. In the Directory Catalogue (2011) there were a total of 40 ‘encouraged’ industries, one of which is renewable energy.

The Commission holds that ‘encouraged’ industries are eligible for additional support from the GOC including mandated access to credit loans and exemptions from customs duties and import value-added taxes for imported equipment.

#### **3.2.1 Main objectives**

- Fully reflect the direction of adjustment to the structure of industries and industrial upgrading.
- Develop further strategic emerging industries and indigenous innovation.
- Develop the service industry.
- Restrict and guide industries that are functioning at levels that are over capacity.
- Achieve sustainable development, including through clean production technology, energy saving and emission reduction, and recycling.

#### **3.2.2 PV industries designated as ‘encouraged’.**

- Concentrated solar power systems, solar photovoltaic power generation system

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<sup>105</sup> *ibid.*

<sup>106</sup> *ibid.* Part III, Chapter 11.

<sup>107</sup> *ibid.* Part III, Chapter 10.

<sup>108</sup> State Development and Reform Commission. March 2011. Catalogue for Guiding Industry Restructuring (2011 Version) (2013 Amendment) Order no. 9 of the National Development and Reform Commission. Issued 27 March 2013.

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integration technology development and application, inverter control systems.<sup>109</sup>

- Building-integrated photovoltaics (BIPV) design and manufacturing.<sup>110</sup>
- Highly efficient solar water heaters and hot water works, high-temperature solar energy utilization technology development and equipment manufacturing.<sup>111</sup>
- Ultrathin electronics industry (1.3 mm or less), the solar industry with ultra-white (equivalent to 5 mm thick visible light transmittance of > 90 per cent), on-line Low-E (low emissivity) coated glass and other special float glass production line; the existing float glass production line using pure oxygen combustion technology, low-temperature waste heat power generation technology; glass furnace with a high-grade refractory; glass deep-processing technology and equipment development and application of technology.<sup>112</sup>
- Improved second generation and third generation of nuclear power equipment and key components; 2.5 MW or more key components of wind power equipment, machine and more than 2.0 MW of wind power equipment control systems, converters, etc.; all kinds of crystalline silicon and thin-film solar photovoltaic cell production equipment; ocean energy (tidal, wave, ocean current) power plant.<sup>113</sup>
- Advanced various types of solar photovoltaic cells and high-purity crystalline silicon material (monocrystalline silicon photovoltaic cell conversion efficiency greater than 17 per cent, polycrystalline silicon solar cell conversion efficiency greater than 16 per cent silicon thin film cell conversion efficiency of more than 7 per cent, cadmium telluride cells greater than 9 per cent conversion efficiency, CIGS cell conversion efficiency greater than 12 per cent).<sup>114</sup>
- Solar thermal and photovoltaic applications integration architecture.<sup>115</sup>
- Semiconductor lighting, photovoltaic solar energy equipment, chip components to equipment, new power battery equipment, surface mount devices (including stencil printers, automatic placement machine, lead-free reflow, photoelectric tester) etc.<sup>116</sup>

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<sup>109</sup> Catalogue for Guiding Industry Restructuring (Version 2011), Section 5, Sub-section 5.1.

<sup>110</sup> Catalogue for Guiding Industry Restructuring (Version 2011), Section 5, Sub-section 5.3.

<sup>111</sup> *ibid.* Section 5, Sub-section 5.4.

<sup>112</sup> *ibid.* Section 12: Construction. Sub-section 12.2.

<sup>113</sup> *ibid.* Section 14: machine. Sub-section 14.23.

<sup>114</sup> *ibid.* Section 19: Light Industry. Sub-section 19.18.

<sup>115</sup> *ibid.* Section 21: Building. Sub-section 21.5.

<sup>116</sup> *ibid.* Section 28: Information Industry. Sub-section 28.25.

### **3.3 Decision of the State Council on Accelerating the Incubation and Development of Strategic Emerging Industries<sup>117</sup>**

#### **3.3.1 State Council influence over the development of emerging strategic industries**

- We shall carry out overall planning and systemic layout for the development of strategic emerging industries, specific the timing of development, and facilitate the coordinated development. At the same time, we shall select the sectors with the best foundation and conditions to be the breakthrough points and focus on promoting them, aggressively incubate industry clusters and facilitate the pioneering development in areas with advantages.<sup>118</sup>
- We must adhere to the integration of raising the long-term national economic competitiveness with the support for current development. We shall take a long term perspective, grasp the new development direction for technology and industries, make early deployment in the major pioneering sectors, and actively incubate industries. At the same time, grounded on the presence, we shall promote faster development in the relevant industries that will have major impact in alleviating the bottleneck and constraints in the economic and social development, promote the sound development in high-tech industries, and accelerate the formation of pillar industries.<sup>119</sup>
- Grounded on the national conditions, we shall strive to achieve rapid and sound development of the key sectors according to the development stages and characteristics of strategic emerging industries, further define the key direction and primary task of development, draw up overall planning and deployment, and focus the strengths and expedite the advancement.<sup>120</sup>

#### **3.3.2 Photovoltaic as an ‘alternative energy industries’ and strategic emerging industries**

- We shall actively research and develop new generation nuclear energy technology and advanced reactors and develop the nuclear energy industry, accelerate the popularisation and the application of technology in utilising solar thermal energy, and develop the diversified solar energy, photovoltaic and photo-thermal power generation markets. We shall raise the level of wind power technical equipment and orderly promote the large-scale development of wind power, and accelerate the adaptation to the construction of smart power grids and the operating systems developed using alternative energy, thereby developing and utilising biomass energy according to the local conditions.<sup>121</sup>

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<sup>117</sup> State Council. October 2010. Decision of the State Council on Accelerating the Incubation and Development of Strategic Emerging Industries. Doc number: Guo Fa (2010) No.32. Effective as at 10 October 2010.

<sup>118</sup> Decision of the State Council on Accelerating the Incubation and Development of Strategic Emerging Industries. Section (2).

<sup>119</sup> *ibid.*

<sup>120</sup> *ibid.* Section (3).

<sup>121</sup> *ibid.*

### **3.3.3 Examples of fiscal support provided to emerging strategic industries<sup>122</sup>**

- The intensity of fiscal support shall be expanded.
- The taxation incentives policies shall be perfected.
- The financial institutions to expand the credit support shall be encouraged.
- The financing role of multi-level capital market shall be fully played.
- Venture capital and equity investment funds.

### **3.3.4 State Council's central role in directing the activities of strategic industries<sup>123</sup>**

- We shall promote innovation of institutional mechanisms, strengthening the organisational leadership and accelerating the incubation and development of strategic emerging industries are the major strategic mission for China in the new era of economic and social development, reform and innovation must be aggressively promoted, strengthen the organisational leadership, overall planning and coordination, and provide impetus and conditions for the development of strategic emerging industries.
- The organisation and coordination shall be strengthened. We shall set up inter-ministerial coordination mechanism for the development of strategic emerging industries led by Development and Reform Commission, thereby forming the joint effort to draw up overall planning and to promote.
- All relevant departments of State Council and the People's Government in all provinces (districts and cities) are to grasp and formulate implementation programs and specific execution measures according to the requirements of their decision, expand the intensity in support, accelerate the incubation of strategic emerging industries to become leading industries and pillar industries so as to make new contribution towards the modernised development of China.

## **3.4 Notice of Several Opinions on Curbing Overcapacities and Redundant Constructions in Certain Industries and Guiding the Healthy Development of Industries<sup>124</sup>**

The Notice was directed to the people's governments of all provinces, autonomous regions and municipalities directly under the Central Government and the ministries, commissions and offices directly under the State Council.

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<sup>122</sup> Decision of the State Council on Accelerating the Incubation and Development of Strategic Emerging Industries. Section (7).

<sup>123</sup> *ibid.* Section (8).

<sup>124</sup> State Council. September 2009. Notice of Several Opinions on Curbing Overcapacities and Redundant Construction in Certain Industries and Guiding the Healthy Development of Industries. Document Number: Guo Fa (2009) No. 38. Effective as at 26 September 2009.



### **3.4.1 Examples of policy directives targeting polysilicon production capacity of polysilicon<sup>125</sup>**

- Support the production of solar cells made of domestic polysilicon materials and focus on meeting the domestic demand while taking into account the international market.
- Strictly control the development of new polysilicon projects in regions with energy shortage and high electricity prices.
  - Polysilicon projects which are lacking in ancillary comprehensive utilization and which are not in compliance with environmental protection standards shall not be approved or filed.
  - Encourage polysilicon production enterprises to strengthen alliance and cooperation with downstream solar cell manufacturers to extend the industrial chain.
- The scale of new polysilicon projects shall be larger than 3000 tons / year, and shall cover an area of less than 6 ha / thousand tons of polysilicon.
- Support polysilicon enterprises to realize joint operation among polysilicon, power plants and the chemical industry in various forms.
- Support the technological development of energy-saving and environmental-friendly polysilicon of solar energy grade to reduce production costs.
- Polysilicon production capacities with an integrated power consumption of more than 200 kWh / kg shall be phased out by 2011.

## **3.5 Renewable Energy Law of the People's Republic of China<sup>126</sup>**

### **3.5.1 Examples of assistance provided to the Chinese PV Industry**

- Article 2 highlights the inclusion of solar energy within the GOC definition of renewable energy. More specifically the Article notes that: “For the purposes of this Law, renewable energy means non-fossil energy, including wind energy, solar energy, water energy, biomass energy, geothermal energy and ocean energy”.
- Article 4 highlights the priority given to solar energy by noting that: “in energy development, the State gives first priority to the exploitation of renewable energy and promotes the establishment and expansion of the market for renewable energy by setting objectives for the total volumes of the renewable energy to be exploited and taking appropriate measures”.
- Article 8 highlights the central role of the State Council and the interconnectivity of the GOC planning, policies and directives by noting that: “The energy administration department under the State Council shall, on the basis of medium-to-long term objectives for the total volume of renewable energy to be exploited throughout the country, work with the relevant departments under the State

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<sup>125</sup> Notice of Several Opinions on Curbing Overcapacities and Redundant Construction in Certain Industries and Guiding the Healthy Development of Industries. Article 2 (2).

<sup>126</sup> Standing Committee of the National People's Congress. December 2009. Amended by the Decision of the Standing Committee of the National People's Congress on Revising the 'Renewable Energy law of the Peoples Republic of China'. Effective as at 26 December 2009.

Council to draw up a national plan for exploitation of renewable energy which shall be carried out upon approval of the State Council”.

- Article 8 further notes that: “The energy authorities departments of the peoples government of provinces, autonomous regions, and municipals directly under the Central Government shall, on the basis of the medium-to-long term objectives for the exploitation of renewable energy in their own administrative areas, work with the relevant departments of the peoples governments at the corresponding level to draw up plans for the exploitation of renewable energy in their own administrative areas, which shall be carried out upon approval by the people’s governments at the corresponding levels”.

### **3.5.2 Examples of preferential financial assistance to specific industries**

- Article 10. “The energy administration department under the State Council shall in accordance with the national plan for the exploitation of renewable energy, compile and publish a development guidance catalogue for the renewable energy industry.
- Article 25. “Financial institutions may offer preferential loans with financial interest subsidy to projects for exploitation of renewable energy that are listed in the national development guidance catalogue of the renewable energy industry and meet the requirements for granting loans”.
- Article 26. “The State grants preferential taxation to projects listed in the development guidance catalogue of the renewable energy industry. The specific measures in this regard shall be formulated by the State Council”.

## **3.6 12<sup>th</sup> Five Year Plan for the Solar Photovoltaic Industry**

The FYP-SPVI (12<sup>th</sup>) is a guiding document for the country’s PV industry development during the 12<sup>th</sup> five-year period. The FYP-SPVI (12<sup>th</sup>) identifies a number of cost reduction and output expansion goals and policy measures. Examples of these goals and policy measures are set out below.

### **3.6.1 Section (III) ‘Guiding Ideologies, Basic Principles and Development Goals’<sup>127</sup>**

- Engaging in industry wide planning and industrial deployment, supporting leading enterprises to grow and encouraging key photovoltaic enterprises to promote resource integration, mergers and reorganisation.
- A reduction of costs of PV power generation through the mass production of high-purity silicon materials, enhancement of cell conversion efficiency rates, localisation of production equipment manufacturing, R&D of new types of cells and raw materials, and system integration.
- A reduction in the cost of PV modules and PV systems to 7,000 yuan/kW and 13,000 yuan /kW respectively by 2015. The plan also indicates that the cost of PV modules should fall further to 5,000 yuan/kW by 2020.

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<sup>127</sup> 12<sup>th</sup> Five-Year Plan for the Solar Photovoltaic Industry. Section III.

- The provision of support to leading polysilicon enterprises and major enterprises to enable their respective production to reach 50,000 metric tonnes and 10,000 metric tons per year.

The provision of support to ensure that by 2015 there will be one PV enterprise with annual sales revenue exceeding RMB 100 billion, 3-5 PV enterprises with annual sales revenue exceeding RMB 50 Billion, and 3-4 enterprises specializing in PV equipment manufacturing with annual sales revenue exceeding RMB 1 billion.

### **3.6.2 Section (V) ‘Key Focus Areas for the 12<sup>th</sup> Five-Year Plan Period’<sup>128</sup>**

- (a) High-Purity Polysilicon. Support solar-level polysilicon production technology involving low energy consumption and low cost. Based on the existing foundation, through further research and systematic improvement, support the R&D of stable production techniques for electronic-grade polysilicon, and establish kiloton electronic-grade polysilicon production lines. Achieve breakthroughs in techniques, technologies, and equipment for energy-efficient large scale purification, high-efficiency nitrogen recovery and purification, high-efficiency chemical vapour deposition, and the comprehensive utilisation of polysilicon by-products. Construct 10,000-ton high-purity polysilicon production lines, with total energy consumption below 120 kWh/kg.
- (b) Silicon Ingots / Silicon Wafers. Support high-efficiency, low-cost, large-size ingot technology, focusing on the development of quasi-single crystal ingot technology. Achieve breakthroughs in key technologies for new-type slicing below 150-160 micron, such as cutting technology for silicon carbide and steel wires, in order to improve the quality of silicon wafers, the numbers of wafers per unit of silicon materials, and to reduce silicon material losses during slicing.
- (c) Crystalline Silicon Cells. Aggressively develop and industrialise crystalline silicon cells with a high conversion rate and a long service life. Provide key support for the research and application of low-reflectivity texturing technology, selective emitter technology, electrode alignment technology, plasma passivation technology, low temperature electrode technology, and fall back junction technology. Pay attention to key technologies of thin-film silicon, crystalline silicon heterojunction solar cells, as well as other new types of solar cells.

### **3.6.3 Section (VI) ‘Policy Measures’<sup>129</sup>**

- To enhance the status of PV energy and strengthen strategic industrial deployment by implementing relevant planning on industrial transformation, upgrading, and renewable energy, map out policies in the areas of industry, taxation, and finance to actively promote the healthy development of China’s PV Industry.
- To direct overall planning and promote reasonable industrial layout through promoting industrial transformation and upgrading, adhere to the combination of ‘led by the market and guided by the government’ and support leading enterprises and to allow them to grow stronger.
- To promote resource integration and encourage enterprises to engage in intensive development and operations. Support highly competitive enterprises with low

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<sup>128</sup> *ibid.* Section V.

<sup>129</sup> *ibid.* Section VI.

- production costs to merge and transform ailing PV enterprises.
- To continue to implement the Golden Sun Project and other supporting measures, accelerate the development of the domestic PV market, insist on a combination of grid-connected power generation and off-grid application and to achieve these objectives through the use of tariffs, moderate financial subsidies, and active financial support, actively expand the domestic PV market.

### **3.7 Several Opinions of the State Council on Promoting the Healthy Development of Photovoltaic Industry<sup>130</sup>**

The directive is addressed to ‘People’s Governments of all provinces, autonomous regions and municipalities under the Central Government, all ministries and commissions of departments directly under the State Council’.

The directive identifies that the current excess capacity in the Chinese PV Industry which is causing severe problems such as serious redundancy in production capacity. The directive seeks to address the overcapacity in the Chinese PV industry by trying to ‘accelerate structural adjustment’ (supply side), and expand ‘the application of PV power generation’ (demand side).<sup>131</sup>

#### **3.7.1 Initiatives identified in the Directive**

- Support for accelerated structural adjustment.<sup>132</sup>
- Support of strong enterprises and eliminate poor performing ones.
- Industrial re-organisation interventions.
- Support for an expansion of demand.<sup>133</sup>
- Provision of funding and free services by power grid enterprises, which are state owned, to support photovoltaic power generation.
- Other major fiscal and other financial support policies involving funding for the demand side of the PV industry.
- Regulatory interventions.<sup>134</sup>

#### **3.7.2 State Council control of subordinate central departments, agencies and provinces**

- “Development plans shall be formulated for the photovoltaic industry in light of the needs pertinent to the development of the industry. Different regions of the country may, in light of national plans for the development to the photovoltaic industry and local needs, formulate their respective plans for implementing schemes. Proper connection and coordination between national plans and local plans’ and that the ‘photovoltaic manufacturing and industrial application, photovoltaic power generation and development of corresponding power grids must be ensured’.<sup>135</sup>

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<sup>130</sup> State Council. July 2013. Several Opinions of the State Council on Promoting the Healthy Development of the Photovoltaic Industry. Document Number Guo Fa (2013) No.24. Effective as at 04 July 2013.

<sup>131</sup> *ibid.* Article 1.

<sup>132</sup> *ibid.* Article 4, Section 4(1).

<sup>133</sup> *ibid.* Article 3, Section 3(1).

<sup>134</sup> *ibid.* Article 3.

<sup>135</sup> *ibid.* Article 5, Section 5(1).

### 3.7.3 Directives to subordinate organisations to the State Council

- All Departments concerned shall, in accordance with these Opinions, formulate their respective support documents for the industry according to their respective duties on an early date, improve support policies on the pricing and taxation as well as credit and land supply to photovoltaic power generation, and ensure that all measures are properly carried out.”
- “All provisional people’s governments shall, based on actual situation enhance their administration of the photovoltaic industry within their respective jurisdictions, and formulate detailed plans and properly implement relevant policies so as to guide the orderly and coordinated development of the industry. Furthermore associations and institutions relating to industry shall be enhanced and full play shall be given to the role of industry organisations in enhancing industry self-discipline, popularizing advanced technology and management expertise, statistical survey and research on and formulation of standards”.<sup>136</sup>

### 3.8 Standard Conditions for the Photovoltaic Manufacturing Industry<sup>137</sup>

The Standard Conditions sought to limit capacity expansion in accordance with Several Opinions of the State Council on Promoting the Healthy Development of Photovoltaic Industry.

#### 3.8.1 Intentions of the Standard Conditions intervention in the Chinese PV Industry

- Strengthen the administration of photovoltaic manufacturing industry.
- Standardize the order of industry development.
- Improve the industry development.
- Accelerate and promote the transformation and upgrading of photovoltaic industry.

#### 3.8.2 Restrictions on new entrants and capacity expansion

- Article 1. New photovoltaic manufacturing projects only for the purpose of capacity expansion shall be strictly controlled. New, renovation and expansion projects that are necessary for enhancing technological innovations and reducing production costs shall be reported to the competent industry authority and competent investment authority for records. The minimum proportion of capital funds for new, renovation and expansion photovoltaic manufacturing projects shall be 20%.<sup>138</sup>  
Article 2. Production Scale and Process Technology MIIT identifies minimum R&D expenditures for photovoltaic manufacturers, namely a minimum of 3 per cent of total sales or 10 million RMB. The document also lists minimum production requirements for polysilicon, silicon ingots, rods and wafers, as well as photovoltaic cells and photovoltaic modules. Finally, specific technological and efficiency requirements are identified for products including polysilicon, photovoltaic cells and

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<sup>136</sup> *ibid.* Article 5, Section 5(1).

<sup>137</sup> Ministry of Industry and Information Technology. September 2013. Standard Conditions for Photovoltaic Manufacturing Industry. Document Number: Announcement of the Ministry of Industry and Information Technology (2013) No.47. Effective as at 16 September 2013.

<sup>138</sup> *ibid.* Article 1.

photovoltaic modules.<sup>139</sup>

### **3.8.3 Repercussions for not complying with the Standard Conditions.**

- New, renovation and expansion photovoltaic manufacturing enterprises and projects shall comply with the requirements of the Standard Conditions.
- Existing photovoltaic manufacturing enterprises and projects shall comply with the requirements of the Standard Conditions. Enterprises or projects that fail to comply shall, according to the requirement of industry transformation and upgrading and under the guidance of national industrial policies, reach the requirements of the Standard Conditions as soon as possible by merger and reorganization or technical transformation.
- Investment in land supplies and environment assessment, energy conservation assessment, quality supervision, safety regulation, credit granting for photovoltaic manufacturing enterprises and projects shall be subject to the Standard Conditions. Enterprises and projects that fail to comply with the Standard Conditions shall not be entitled to policy supports.

### **3.9 Announcement of the Ministry of Industry and Information Technology, the National Development and Reform Commission and the Ministry of Environmental Protection – Standards for the Polysilicon Industry Access**

The Announcement notes that:

“In order to thoroughly implement the scientific outlook on development, promote energy conservation, consumption reduction, the phasing out of backward enterprises, as well as the adjustment of the structure of the polysilicon industry, and guide the healthy development of the industry, the Ministry of Industry and Information Technology, the National Development and Reform Commission and the Ministry of Environmental Protection formulated the Standards for the Polysilicon Industry Access in conjunction with the relevant departments in accordance with the relevant laws, regulation and industrial policies of the State and these Standards are hereby announced.”

“The relevant departments shall carry out work such as the approval of the construction of polysilicon projects, the record-filing administration, the land approval, the environmental impact assessment, the credit financing, the production approval and the certification of the product quality in accordance with these standards”.

“In order to thoroughly implement the scientific outlook on development, regulate and guide the healthy development of the polysilicon industry, and resolutely restrict redundant construction and excess capacity of the industry, the Standards for the Polysilicon Industry Access are formulated in accordance with the relevant laws, regulation and industrial policies of the State and based on the principles of optimising arrangement, adjusting structure, conserving energy, reducing consumption, protecting the environment and safe production”.<sup>140</sup>

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<sup>139</sup> *ibid.* Article 2.

<sup>140</sup> Ministry of Industry and Information; National Development and Reform Commission; Ministry of Environmental Protection. December 2010. Announcement of the Ministry of Industry and Information

### **3.9.1 Restrictions on investment in Chinese PV Industry**

#### **3.9.1.1 Construction Conditions of the Project and Production Arrangement**

(1) The polysilicon project shall comply with the state's industrial policy, land use policy and the development plan of the industry. The minimum capital ratio of the investment in the new construction, re-construction and expansion projects shall not be lower than 30 per cent. New construction projects for polysilicon in areas with energy shortage and relatively high electricity prices shall be strictly controlled. Polysilicon projects that lack comprehensive ancillary facilities and do not reach the standards in safety, health and environmental protection shall not be approved or filed.

#### **3.9.1.2 Production Scale and Technological equipment**

(1) The scale of each phase of the solar grade polysilicon project shall be more than 3,000 tons / year. The scale of the semiconductor grade polysilicon project shall be more than 1,000 tons / year.

### **3.9.2 Supervision and administration of the Chinese PV Industry**

(1) The Ministry of Industry and Information Technology is responsible for the administration of the polysilicon industry and shall, after consulting the relevant departments, publish a list of polysilicon enterprises which meet the access conditions in the form of a joint announcement, form the Access List of the Polysilicon Industry and implement social supervision and dynamic management.

(5) In any of the following situations, the enterprise that has been announced will have its announcement qualification revoked:

- (a) Being involved in any fraudulent practises when filling in the information.
- (b) Refusing to accept supervision and examination.
- (c) Failing to meet the requirements of the Access Conditions.
- (d) Involving any major safety and pollution accidents.
- (e) Violating provisions of the relevant laws, regulations and the State's industrial policies.

(6) The investment administrative department shall not approve and file polysilicon project that do not meet the requirements on planning arrangement, production scale, resource utilisation, environmental protection, quality inspection and work safety administration shall not handle the relevant formalities and the financial institutions shall not provide loans or credit extensions support in other forms.

(7) The relevant industry association, industry alliances and intermediary institutions shall assist in handling the work concerning the implementation of the Access conditions and shall organise the enterprises to strengthen coordination and self-disciplinary management.

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Technology, the National Development and Reform Commission and the Ministry of Environmental Protection – Standards for the Polysilicon Industry Access. Doc Number Gong Lian Dian Zi (2010) No. 137. Effective as at 31 December 2010.

## APPENDIX 3 - BENCHMARK PRICES OF PV CELLS

### 1. Background

Having found that a particular market situation exists in the PV modules or panels market in China, the Commission calculated normal value under s.269TAC(2)(c) of the Act.

Regulation 43(2) requires that if an exporter keeps records in accordance with generally accepted accounting principles and those records reasonably reflect competitive market costs associated with the production of like goods then the cost of production must be worked out using the exporter's records.

### 2. Impact of market situation finding on polysilicon market

The FYP-SPVI (12<sup>th</sup>) also included the following goals and directives regarding the polysilicon industry:

- Reduce the costs of photovoltaic power generation through the mass production of high-purity silicon materials;
- support provided to major enterprises to grow stronger so that by 2015, leading polysilicon enterprises will produce 50,000 metric tons per year, and major enterprises will reach 10,000 metric tons per year; and
- Polysilicon, solar cells, and other products can meet the installed capacity requirements set by the national development plans for renewable energy, and can also meet demand in the international market.

For the same reasons as were outlined in Appendix 2 regarding GOC intervention in the market for PV modules or panels, the Commission is satisfied that there is also GOC intervention in the upstream polysilicon market. Polysilicon constitutes a significant proportion of the cost of production of PV cells, which in turn represents approximately 60 per cent of the total cost to make and sell of the PV modules or panels (as reported by the cooperating exporters).

The Commission has therefore determined that the cost of PV cells used in the production of PV modules or panels were not market competitive costs. The Commission has accordingly determined that it is necessary to use a benchmark price that represents competitive costs for mono-crystalline cells and for poly-crystalline cells in the Chinese market to replace those costs when calculating the normal value under s.269TAC(2)(c).

### 3. Establishing benchmark price for cells

In determining a benchmark there are three options in order of preference based on World Trade Organisation (WTO) Appellate Body findings:

- private domestic prices;
- import prices; and
- external benchmarks.

Each of the above options has been examined and is discussed below.



### **Limitations**

considering how to identify appropriate benchmark prices for the mono-crystalline cells and poly-crystalline cells, the Commission notes the following:

- detailed, relevant import and export data from China was not available to ascertain the price of imported PV cells; and
- some exporters manufactured PV cells in-house rather than purchasing them from third parties.

### **Private Domestic Prices**

As discussed in the report, the GOC did not respond to the government questionnaire and therefore the Commission does not have reliable evidence concerning the volume and value of cells produced in China during the investigation period. However, even if the GOC had provided this data, it is likely the Commission would have still determined that domestic prices for the PV cells were distorted for the reasons outlined in Appendix 2.

The Commission therefore considers that private domestic prices for PV cells in China are not suitable for determining a competitive market cost.

### **Import Prices**

As noted above, the Commission does not have evidence of the volume and value of cells imported into China during the investigation period.

The four selected exporters imported mono-crystalline cells and poly-crystalline cells during the investigation period, but these accounted for less than five per cent of the total volume of PV cells used in production.

As noted in Appendix 2, GOC intervention in the market has resulted in excess supply of and excess capacity to produce PV cells, which would cause prices to fall. The Commission considers that prices for imported PV cells would need to compete with domestically produced PV cells, and therefore import prices are likely to have also been distorted to some extent.

The Commission therefore considers that import prices are not suitable for determining a competitive market cost for mono-crystalline and poly-crystalline cells in China.

### **External Benchmarks**

The Commission considered various options as outlined below to establish a benchmark price of PV cells using external sources. These included:

- PvXchange Trading GmbH (PvXchange)
- Energy Trend
- Bloomberg New Energy Finance (BNEF)

#### **(i) PvXchange Trading GmbH (PvXchange)**

PvXchange is a global B2B (business to business) exchange for photovoltaic components. The company was founded in 2004 in Berlin, Germany and has activities throughout Europe, the USA, Canada and East Asia.

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PvXchange provides an online trading platform where photovoltaics suppliers and buyers are connected worldwide. It offers solar modules, inverters and photovoltaic systems, as well as consulting services. The company serves manufacturers, wholesalers, distributors, installers and project developers. It specifically provides price index information that reflects the average prices quoted on the European Spot Market. All prices are net prices without VAT, reported in Euro per watt peak.

PvXchange is a German based company and it specifically provides price index information quoted on the European spot market. These prices are specific to the European market, and therefore may not reflect the global market competitive price of PV cells. Hence PvXchange is considered a less preferable option for a benchmark price of PV cells.

### **(ii) Energy Trend**

In a submission dated 2 July 2015, Tindo suggested that PV cell prices in China do not represent a competitive market price. Tindo suggested an uplift of 18 per cent for the cost of poly-crystalline -cells. The suggested uplift was based on the difference between Tindo's estimate of Chinese PV cell prices and the world prices sourced from industry journals. Tindo further suggested an additional uplift of 11 per cent should be applied to poly-crystalline PV cells prices to reflect the competitive market price for mono-crystalline cells. Tindo calculated this uplift from the difference between world prices for poly-crystalline and mono-crystalline cells sourced from industry journals and "EnergyTrend.com" (EnergyTrend).

EnergyTrend is the solar energy division of TrendForce. TrendForce is a global provider of market intelligence on the technology industries. The company has a membership base of 410,000 subscribers. It serves clients throughout the technology and financial services sectors. Founded in 2000 and headquartered in Taipei, Taiwan, TrendForce has extended its presence in China since 2004 with offices in Shenzhen and Shanghai.

EnergyTrend covers multiple green energy research sectors including solar energy, consumer/power lithium batteries, and electric cars. Its photovoltaic market intelligence services include solar price updates, market trend reports and comprehensive analysis of subsidy policies around the globe that lead to market installation demand forecasts.

The Commission notes that:

- the EnergyTrend price data provided by Tindo included international prices, however these were for dates outside of the investigation period;
- Tindo advised the Commission that they were unable to provide EnergyTrend price data relating to the investigation period; and
- the Commission offered to purchase the relevant price data from EnergyTrend, however EnergyTrend did not respond to the Commission's request.

The Commission was not able to obtain sufficient data from EnergyTrend, and therefore does not consider EnergyTrend to be a preferable benchmark price.

### **(iii) Bloomberg New Energy Finance (BNEF)**

Bloomberg L.P. is a privately held financial software, data and media company headquartered in New York City, founded by Michael Bloomberg in 1981.

In 2009, Bloomberg L.P. purchased New Energy Finance, a data company focused on energy investment and carbon markets research based in the United Kingdom. New

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Energy Finance was created in 2004 to provide news, data and analysis on carbon and clean energy markets. Bloomberg L.P. acquired the company to become an industry resource for information to support low-carbon energy solutions.

BNEF reports contain the current prevailing price data and cost components of photovoltaic modules and panels from 150 respondents including major suppliers and customers in the solar photovoltaic industry. BNEF has a Solar Spot Price Index providing spot prices and international average prices for mono-crystalline cells and poly-crystalline cells. The international average price is the average price of all companies who are either manufacturing or procuring the cells outside of the China mainland.

The Commission has determined that the BNEF data provides the most appropriate benchmark price for the mono-crystalline cells and poly-crystalline silicon cells for the following reasons:

- BNEF has a Solar Spot Price Index providing spot prices and international average prices for mono-crystalline cells and for poly-crystalline cells. The BNEF international average price is the average price of all companies who are either manufacturing or procuring the cells outside of the China's mainland;
- BNEF price data was used by the Canadian Border Security Agency (CBSA) and considered "reliable and accurate"; and
- In his report, Dr Barker recommended that the Commission use pricing data from BNEF reports to apply specific methodologies in estimating market prices.

### 4. Conclusion

The Commission obtained international average prices for mono-crystalline cells and multi-crystalline (poly-crystalline) cells sourced from the BNEF International Solar Cell Price Index for the investigation period. The Commission calculated quarterly averages of the weekly data and obtained BNEF's approval to publish this data on the public record.

The BNEF data for benchmark is as per the table below.

Quarter	Q312	Q412	Q113	Q213	Q313	Q413	Investigation period
Monocrystalline silicon cells - International Price (USD/watt)	0.55	0.48	0.47	0.50	0.50	0.49	0.50
Multicrystalline silicon cells - International Price(USD/watt)	0.44	0.38	0.38	0.42	0.41	0.40	0.40

**Source: Bloomberg New Energy Finance Data**

Note: The Bloomberg New Energy Finance International Solar Cell Price Index is weekly. These quarterly prices are the simple average of the weekly data published during this period. The International Index is the average of quotes submitted to the BNEF Survey website, here: <https://surveys.bnef.com/> excluding quotes from companies primarily active in the Chinese mainland.