



AECOM Australia Pty Ltd +61 2 8934 0000 tel
Level 21, 420 George Street +61 2 8934 0001 fax
Sydney NSW 2000 ABN 20 093 846 925
PO Box Q410
QVB Post Office NSW 1230
Australia
www.aecom.com

23 June 2014

Public Record

The Director
Operations 3
Level 5 Customs House
Anti-Dumping Commission
5 Constitution Ave
Canberra City, ACT 2601

email: operations3@adcommission.gov.au

Dear Sir/Madam,

AECOM Australia Submission to the Anti-Dumping Commission

Dumping Investigation:

ADC 239 – PV Modules or modules being exported from China

Submitter Contact Details:

Craig Chambers,
Market Sector Director – Power Generation
Tel: 02 8934 0000
Fax: 02 8934 0001

AECOMs Response

AECOM is a fully integrated infrastructure and support services firm operating across a broad range of markets, including transportation, facilities, environmental, energy, water and government. Within this portfolio the Australian Power Generation team provides consulting services and technical expertise to the Renewable Energy Industry including project developers, project financiers, project owners, project operators, network operators, regulators and government.

AECOM has been involved in a number of significant Solar PV developments across Australia and believes Solar PV can play a significant role in future electricity generation within Australia provided the industry has access to current and emerging technology. Within the Australian region AECOM is currently working with clients on the development of over 180 MW of Solar PV facilities and is aware of 100's of MWs of potential projects in development.

Whilst individual project requirements differ, project developers and owners typically aim to optimise solar installations by cost to ensure the lowest cost generation from any facility. One of the important factors contributing to the capital cost of a facility is the efficiency and hence power rating of the solar modules. The power rating directly influences the required area of land for a given generation requirement which in turn affects costs associated with leasing, fencing, clearing, offsets, civil works and roads. The power rating also determines the number of modules and hence associated costs of mounting structures, DC cabling, AC cabling and labour costs required for installation. The costs to operate and maintain a Solar PV facility are also influenced by the number of modules in a facility and minimising the number of modules will reduce operational costs associated with module inspections, replacement and cleaning.

AECOM understands that currently, Tindo has capability to manufacture 240 W and 250 W DC modules at a capacity of up to 100 000 units per annum.

To ensure the Solar PV generators remain competitive in the Australian power utility market space, it is critical that developers continue to have the ability to adopt high efficiency and latest technologies. For the utility scale projects that AECOM is currently working on, facilities are being optimised around the use of modules that are rated 300 W or more which means there is currently no equivalent module supplier in Australia.

AECOM is of the belief that Tindo do not manufacture a "like good" to the goods that are generally required for development of modern 'utility scale' Solar PV facilities and the reasons are outlined below:

- **Physical and functional likeness:** Currently, Tindo has certification and the capability to manufacture a 250 W module but are not certified to produce modules exceeding 265 W. The 250 W modules produced by Tindo comprise 60 individual cells whereas the 300+W modules that are typically incorporated into design of modern utility scale Solar PV facilities comprise 72 cells. This physical difference results in 300+W modules achieving 20% increase in power output for a nominal increase in module size. The difference in module efficiency significantly impacts the costs associated with construction and operation of a Solar PV facility - as outlined previously.
- **Commercial likeness:** We understand the Tindo products are primarily designed and sold to the domestic rooftop market and do not compete with modules designed for utility scale ground-mounted systems. This is reflected by the fact that the Tindo products are not certified for ground-mounted systems by the Clean Energy Council rather they are certified for housing/building rooftop applications.
- **Production capability:** We understand that Tindo's production capacity for its modules is up to 100,000 units per annum which equates to 25 MW of module production per annum assuming 250 W modules. Modern utility scale Solar PV facilities that AECOM are aware of within Australia are typically in the range 20-100 MW. For the larger facilities this could be 4 years of full production for the Tindo facility which would likely make many projects unviable. To minimise the significant financing costs associated with construction of the utility scale facilities, there is a requirement to deliver modules to a project at a rate that significantly exceeds the production capacity of the Tindo facility. Typically the modules for such a facility would be expected to be delivered over a 6 month period.

Given the above commentary, AECOM is of the belief that Tindo do not manufacture a "like good" to the modules that are generally required for development of modern 'utility scale' ground mounted Solar PV facilities.

Accordingly, we would expect developers and constructors of such projects would be able to seek an exemption to any levy that may be applied as a result of this investigation.

Yours sincerely,



Craig Chambers
GM Power Generation (Australia & NZ)
craig.chambers@aecom.com

Mobile: +61 419 992 380
Direct Dial: +61 2 8934 1060