

# Australian CleanTech Index

2016-17

## Annual Performance Report

July 2017

To request further information or to be added to the distribution list for future ACT Australian CleanTech Index reports, please see [www.auscleantech.com.au/Pages/cleantech.html](http://www.auscleantech.com.au/Pages/cleantech.html) or contact John O'Brien, Managing Director, Australian CleanTech at [john.obrien@auscleantech.com.au](mailto:john.obrien@auscleantech.com.au)



## **Table of Contents**

<b>1. Australian CleanTech Index Overview</b>	<b>3</b>
<b>2. Australian CleanTech Index Performance FY17</b>	<b>4</b>
<b>3. Component Sub-indices</b>	<b>8</b>
<b>4. Component Companies on 30 June 2017</b>	<b>10</b>
<b>5. China CleanTech Index</b>	<b>11</b>
<b>6. Overview of Index Rules</b>	<b>12</b>

## 1. Australian CleanTech Index Overview

The Australian CleanTech Index provides the definitive measure of the performance of Australian listed cleantech stocks.

The cleantech industry is split into a number of sub-sectors as detailed in the table below. Each of the sub-sectors contains companies that have both environmental and economic benefits.

Solar Thermal and Photovoltaics	Waste Management & Recycling
Wind Generation	Energy Efficiency & Biomaterials
Biofuels	Green Buildings
Water	Energy Storage & Fuel Cells
Environmental Services	Wave, Tidal & Hydro
Low Emissions Vehicle Technologies	Biogas
Carbon Trading	Geothermal – Hot dry rocks and conventional

The cleantech sector is fundamentally different to Socially Responsible Investments (SRI) or Environmental, Social and Governance (ESG) performance. SRI and ESG look at incremental improvements in company performance and can be seen as ‘operational hygiene’ measures that find the best in class. Cleantech focuses on companies whose output positively enhances the communities and ecologies in which they reside. It is about doing ‘more good’ rather than ‘less bad’.

With 65 companies falling under the coverage of the Index and with a combined market capitalisation, after its rebalance, of over \$33.0 billion, the Australian CleanTech Index presents for the only complete picture of the Australian cleantech industry’s growth in a single measure.

The Index is weighted by market capitalisation and is benchmarked against both the ASX200 and the ASX Small Ordinaries. The rules for the formulation and management of the Index have been developed with reference to global best practice. An overview of these rules is provided in this annual performance report.

The Australian CleanTech Index is updated each month and published on the Australian CleanTech website at [www.auscleantech.com.au](http://www.auscleantech.com.au), in the [Ethical Investor](#) magazine, in [Renew Economy](#) and in the international [Cleantech Investor](#) publication.

Monthly results can be emailed directly to interested parties by subscribing at [http://www.auscleantech.com.au/pages/ACT\\_Australian\\_Cleantech\\_Index.php](http://www.auscleantech.com.au/pages/ACT_Australian_Cleantech_Index.php).

## 2. Australian CleanTech Index Performance 2016-17

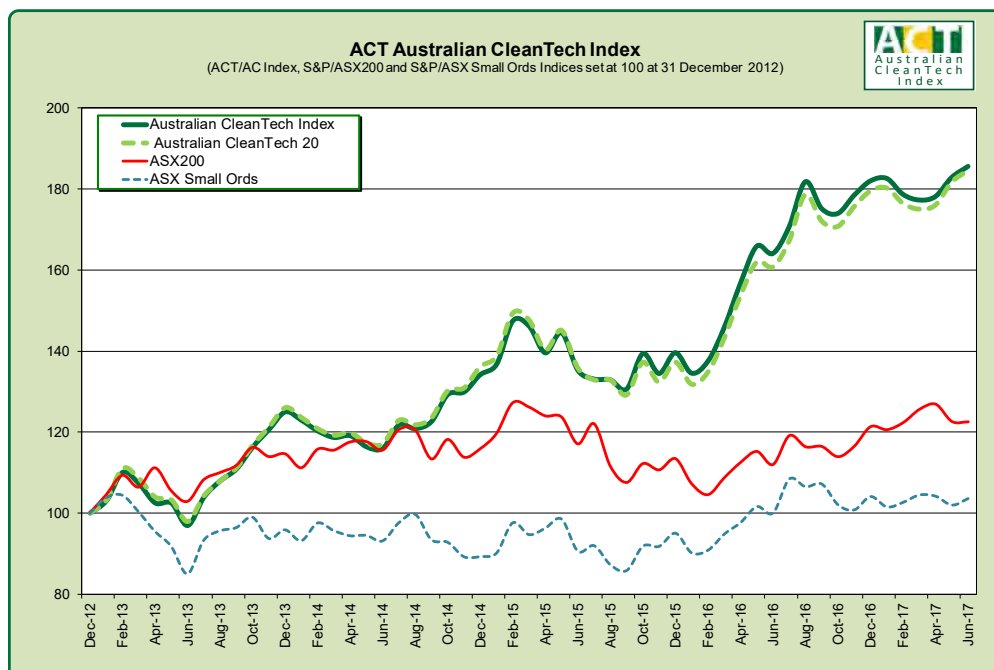
The Australian CleanTech Index outperformed the ASX200 for both the month of June 2017 and for the full 2016-17 financial year.

Over the fourth quarter of the 2017 fiscal year, the Australian CleanTech Index recorded a gain of 4.7% compared to the ASX200's loss of 2.4% and the ASX Small Ordinaries' 0.8% loss.

Over the full 2017 fiscal year, the Australian CleanTech Index recorded a gain of 13.1%, ahead of the ASX200's gain of 9.4% and the ASX Small Ordinaries' gain of only 3.6%.

This continues the strong outperformance for the Index over the last three years where the **returns have been more than 50% higher than for the ASX200.**

Percentage Change	FY14	FY15	FY16	JUN'17	4Q FY17	2H FY17	FY17	3Yrs
<b>ACT Australian CleanTech Index</b>	19.6%	16.6%	21.3%	<b>1.5%</b>	4.7%	2.0%	<b>13.1%</b>	60.0%
<b>Australian CleanTech 20</b>	19.0%	16.0%	18.4%	<b>1.6%</b>	5.4%	2.8%	<b>14.8%</b>	57.7%
<b>ASX200</b>	12.3%	1.3%	<b>-4.3%</b>	<b>-0.1%</b>	<b>-2.4%</b>	1.0%	<b>9.4%</b>	6.0%
<b>ASX Small Ords</b>	9.6%	<b>-2.8%</b>	10.4%	<b>1.6%</b>	<b>-0.8%</b>	<b>-0.4%</b>	<b>3.6%</b>	11.3%



The market capitalisation of the 65 stocks in the Australian CleanTech Index is A\$33.0 billion, after its rebalance, setting another new high for the sector.

The quarter’s performance was driven by 8 companies with gains of more than 20%. The greatest gains were recorded by ReNu Energy (RNE), SciDev (SDV) and Sims Metal Management (SGM). These gains were partially offset by 17 companies recording losses of more than 20% led by Volt Power Group (VPR), Papyrus Australia (PPY) and Lithium Australia (LIT).

The FY17 performance was driven by 13 companies with gains of more than 30%. The greatest gains were recorded by Galaxy Resources (GXY), Phoslock Water Solutions (PHK) and Carnegie Clean Energy (CCE). These gains were partially offset by 14 companies recording losses of more than 30% led by Volt Power Group (VPR), BuildingIQ (BIQ) and RedFlow (RFX).

The best and worst performers in terms of share price performance over the previous year are shown in the table below.

<b>Fourth Quarter FY17</b>		
<b>Worst Performers Share Price Loss &gt; 20%</b>		<b>Best Performers Share Price Gain &gt; 20%</b>
Tag Pacific	Beacon Lighting Corp	Phoslock Water Solutions
K2 Energy Limited	BuildingIQ	Sims Metal Management
Infigen Energy	Volt Power Group	SciDev
Sterling Biofuels	Lithium Australia	Traffic Technologies
Leaf Energy	Hazer Group	Galaxy Resources
Water Resources Group	RedFlow	Orocobre
CleanTeQ	Seafarms Group	Protean Wave Energy
Papyrus Australia	Environmental Group	ReNu Energy
Range International		
<b>Full Year FY17</b>		
<b>Worst Performers Share Price Loss &gt; 30%</b>		<b>Best Performers Share Price Gain &gt; 30%</b>
Quantum Energy	Mission NewEnergy	Phoslock Water Solutions
K2 Energy Limited	Phoslock Water Solutions	CleanTeQ
Sterling Biofuels	Cleanaway Waste	Sims Metal Management
Papyrus Australia	Sims Metal Management	SciDev (Intec) (SDV)
BuildingIQ	SciDev (Intec) (SDV)	Traffic Technologies
Energy Action	Traffic Technologies	Galaxy Resources
Volt Power Group	Galaxy Resources	Australian Vanadium
Lithium Australia	Australian Vanadium	Genex Power
Neometals	Genex Power	Protean Wave Energy
RedFlow	Protean Wave Energy	Carnegie Clean Energy
Vmoto	Carnegie Clean Energy	Pacific Energy
Vivid Technology	Pacific Energy	
Environmental Group		
Aeris Environmental		

## **Index Rebalance**

The Australian CleanTech Index underwent its quarterly rebalancing at the end of June which took account of recent share issues and other corporate activity.

Two companies changed their names, no companies were removed from the Index and three companies were added to the Index.

### **Name Changes**

**Greatcell Solar (ASX: GSL)** is the new name for Dyesol Ltd (ASX:DYE).

**Volt Power Group (ASX:VPR)** is the new name for Enerji (ASX:ERJ).

### **Additions to the Index**

- **Bingo Industries Limited (ASX:BIN)** is an Australia-based waste management and recycling company. The Company provides environmental and waste management solutions across the waste management supply chain. Its services include Skip Bins, Commercial Waste, Liquid Waste, Recycling Centres, Contaminated Soils and Education. It provides all types of skip bins to residential, building or construction job. Its Commercial Waste services include front lift bins, rear lift bins, compactors and infrastructure services, specialty bins, diversion from landfill and resource recovery service, and account management and education services. Its liquid waste service categories include septic, liquid and hazardous, industrial, and cooking. It operates waste recovery facilities across New South Wales. Its centres produce recycled products, such as recycled soil, recycled bedding sand, recycled aggregate and recycled road base. The Company also specializes in the disposal of contaminated soils for any size project.
- **De.Mem Limited (ASX:DEM)** is an Australia-based company, which designs, builds, owns and operates membrane-based, de-centralized water and waste water treatment systems with a focus on the Asia Pacific region. Membranes provide a physical barrier to water contaminants as, while clean water can permeate the membranes, contaminants are retained and therefore removed from the treated water stream. It offers its product offering within two business segments: Industrial, which provides systems and solutions to its customers for applications in industrial waste water treatment and Municipal and residential, which offers its products and solutions to municipalities or residential developers and other related companies. It is providing water treatment systems to customers in both the industrial and municipal/residential sectors. It offers products, such as de.live, de.pure systems, Nanofiltration membrane, and Sensors and Monitoring.

- **Lithium Power International Limited (ASX:LPI)** is an Australia-based developer of lithium assets. The principal activity of the Company includes identification and acquisition of lithium assets in Australia and South America. It operates through exploration and evaluation of early-stage lithium resources segment. It has four projects regions: two in lithium brine and two in spodumene hard-rock. The Company holds interest in Maricunga Lithium Brine project located in Chile through a joint venture. The Maricunga Lithium Brine project is located approximately 170 kilometers north-east of the mining town of Copiapo. It holds interest in Centenario Lithium Brine project, which is located in north-west Argentina, near the regional center of Salta. It holds two granted exploration tenements in the Greenbushes totaling approximately 398 square kilometers. These include Balingup Project and Brockman Highway Project. It also holds interest in Pilbara Hard-Rock project located in Western Australia.

### 3. Component Sub-Indices

To provide an analysis of the Australian CleanTech Index, a number of sub-indices have been developed. The performance of each of these sub-indices over the last five financial years is shown in the table and charts below.

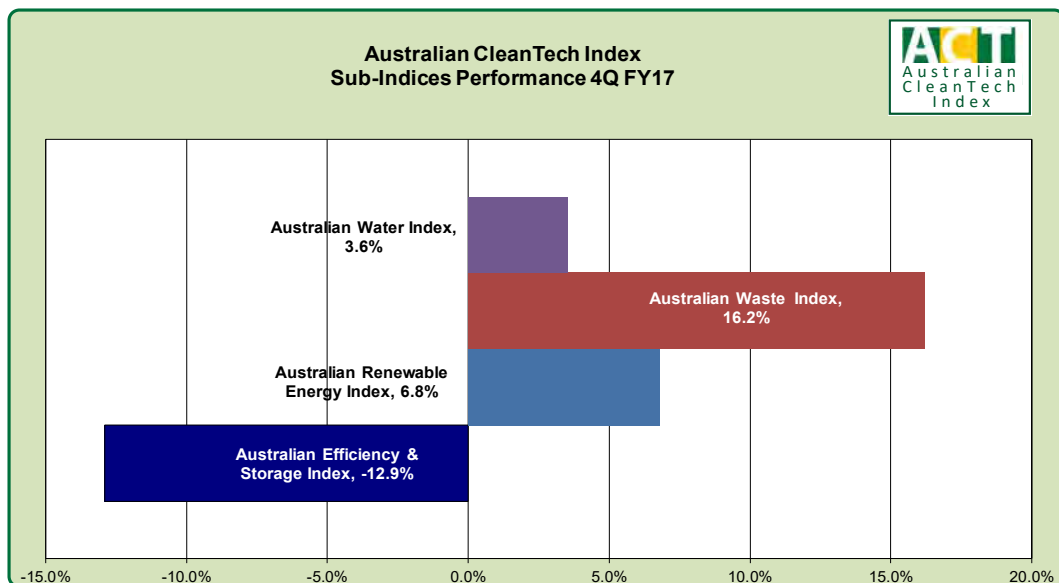
The best performing sector for the three months to June 2017 was the Australian Waste Index and the worst performer was the Australian Efficiency and Storage Index.

Over the 2016-17 financial year, the best performing index was again the Australian Waste Index, being driven by very strong recoveries from Sims Metal Management and Cleanaway, with the Australian Efficiency & Storage Index showing the weakest performance.

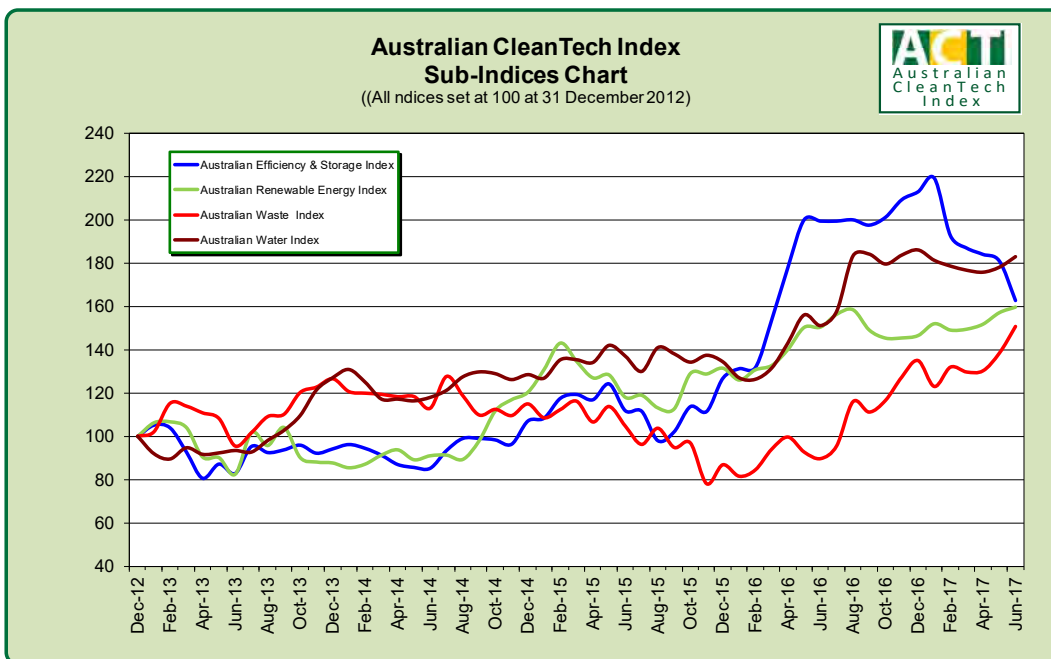
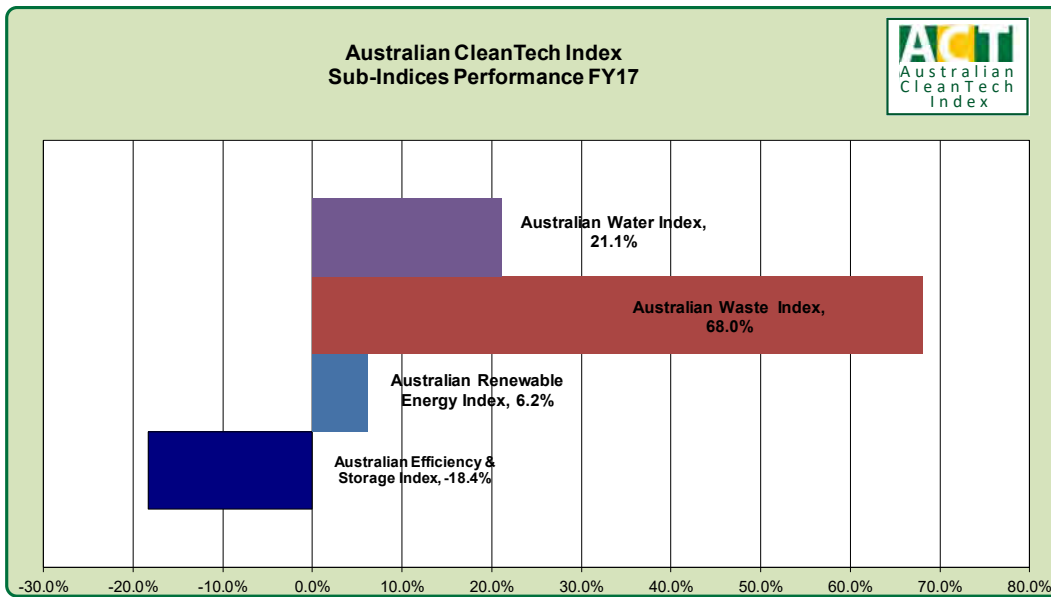
**Australian CleanTech Sub-Indices**

	FY13	FY14	FY15	FY16	4Q FY17	FY17
<b>Australian Efficiency &amp; Storage Index</b>	-27.9%	2.9%	31.0%	78.1%	-12.9%	-18.4%
<b>Australian Renewable Energy Index</b>	-22%	10%	29.5%	27.4%	6.8%	6.2%
<b>Australian Waste Index</b>	-3.4%	18.3%	-7.4%	-14.3%	16.2%	68.0%
<b>Australian Water Index</b>	-14.6%	26.3%	16.1%	10.3%	3.6%	21.1%

The 4Q17 and the FY17 results are shown on the bar charts below.







#### 4. Component Companies on 30 June 2017

The largest 20 largest Index constituents by market capitalisation on 30 June 2017 are provided in the table below. These companies will form the constituents of the Australian CleanTech 20 until the index is rebalanced again on 30 September 2017.

Market Cap Ranking	Company	Ticker
1	Meridian Energy	MEZ
2	Mercury NZ	MCY
3	Reece Australia Holdings	REH
4	Contact Energy	CEN
5	Sims Metal Management	SGM
6	Cleanaway Waste	CWY
7	Reliance Worldwide Corp	RWC
8	Nanosonics	NAN
9	Orocobre	ORE
10	Infigen Energy	IFN
11	Galaxy Resources	GXY
12	Bingo Industries	BIN
13	Tox Free Solutions	TOX
14	CleanTeQ	CLQ
15	Eden Innovations	EDE
16	Beacon Lighting Corp	BLX
17	Pacific Energy	PEA
18	Metro Performance Glass	MPP
19	Emefcy Group	EMC
20	Neometals	NMT

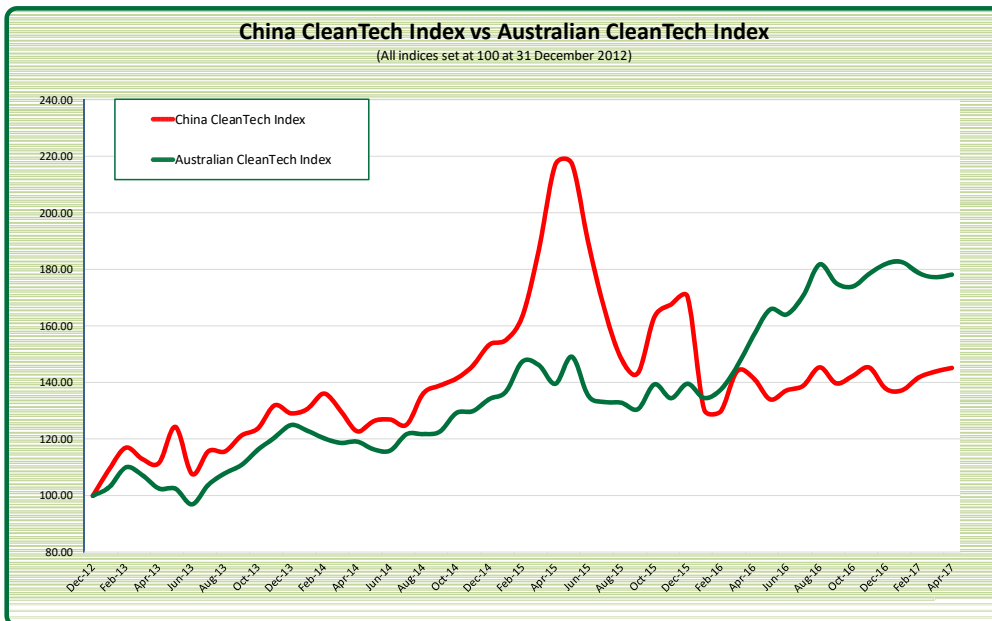
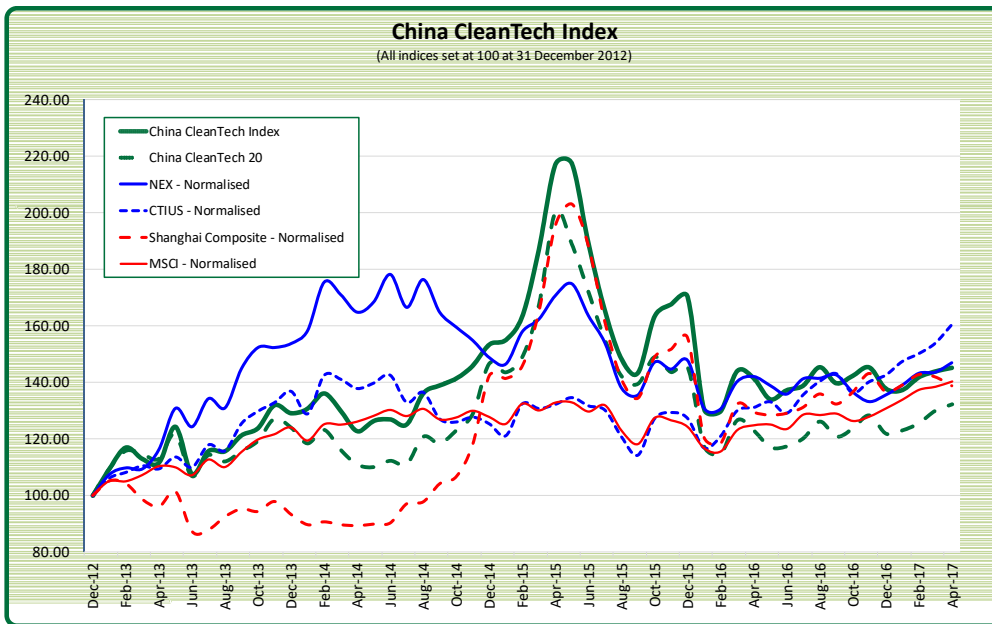
There was one new entrant to the Australian CleanTech 20 in this rebalance: Bingo Industries which replaced the outgoing company Carnegie Clean Energy.

Each of the constituents in the Australian CleanTech 20 has a market capitalisation of more than \$150m.

For a full listing of all companies included in the ACT Australian CleanTech Index, please email your request to [index@auscleantech.com.au](mailto:index@auscleantech.com.au).

### 5. China CleanTech Index

Australian CleanTech, through its Beijing-based Chinese operations, publishes the China CleanTech Index. This index tracks all 162 Chinese-based listed cleantech companies wherever they are listed and provides the definitive measure of Chinese cleantech stocks for global markets. The charts below show the performance of the China CleanTech Index against its benchmarks from December 2012 to the end of April 2017 and also show the relative performance of the China CleanTech Index against the ACT Australian CleanTech Index.



Full details of the China CleanTech Index can be downloaded from [www.sinocleantech.com](http://www.sinocleantech.com), where it is also possible to sign up to receive the monthly performance reports.

## **6. Overview of Index Rules**

### **Criteria for Inclusion**

To be included in the Australian CleanTech Index, a company must be listed on an Australian based stock exchange and have the majority of the current or future revenues generated from an approved cleantech activity. Australian companies listed only on overseas exchanges are excluded as are companies that have some cleantech activities but the majority of their revenue is generated from non-cleantech activities. International companies listed in Australia, even where there are minimal Australian operations, are included in the Index.

### **Closing Prices**

The Australian CleanTech Index and its sub-indices are calculated based on the closing prices on the last day of trading of each calendar month. The Index values are the result of calculating the total market capitalisation of the companies included in the index and normalising this value in comparison to the total market capitalisation at the starting point of the Index. The value of each index was set to equal 100 on 31 December 2012.

### **Number of Shares**

The number of shares used in the calculation of the market capitalisation of each company is based on the total number of Ordinary Shares, including those that are held in escrow and are temporarily unlisted. Shares that are not included in the calculation include listed and unlisted Options, Preference Shares, Warrants and Convertible Notes.

During share buy-back schemes, shares are only removed from the index once they have been cancelled by the company. Shares issued as part of Rights Issues are only included in total shares if formally announced by the company as having been taken up.

### **Rebalancing**

The Indices are all rebalanced at the end of each quarter to take account of any changes to the capital structures of the constituent companies and to add or remove companies to the Index as required. Companies may be added if they have been listed during the previous quarter or have changed their operation such that the majority of their current or future revenue is derived from an approved cleantech activity. Conversely, companies may be removed from the Index if they have been delisted or their activities have changed such that the majority of their current or future revenue will not be sourced from an approved cleantech activity. If a company's shares are suspended from trading, the company remains in the index at rebalancing until such time as it is delisted.

The Index is calculated both prior to and after the rebalancing. The normalising factor is then adjusted to ensure that Index value is unchanged due to the act of rebalancing.

## **Exclusions**

The Australian CleanTech Index excludes some sub-sectors that are included in some other global clean energy and cleantech measures. The reason behind this is to keep the Index focussed on 'pure' cleantech companies that will form part of long term sustainable solutions. The following sub-sectors are excluded from the Index:

### **'Clean' Fossil Fuels**

Natural gas, coal seam methane, underground coal gasification, gas to liquids, carbon capture and storage and clean coal technologies are each sometimes included in indices and funds focussed on clean energy. All of these are excluded from the Australian CleanTech Index because, whilst they have lower emissions profiles than other fossil fuel energy sources, they are all still reliant on fossil fuels and are therefore at best only a transition resource or technology.

### **Nuclear and Uranium**

Whilst the emissions profile of the nuclear industry means that it is likely to form part of the long term global solution to climate change, there are still significant parts of the Australian community that have concerns over the environmental impacts of uranium transport, usage and waste storage.

To prevent this discussion becoming a distraction to the performance of the Australian CleanTech Index, this sub-sector is currently excluded.

### **Agri-Business**

Agri-businesses are included in many measures of environmental performance due to their clear interaction with the environment. Whilst the Australian CleanTech Index will include companies that provide products and services to improve agriculture's impact on the environment through, for instance, the use of water and energy saving technologies, it will not include the businesses that merely purchase these technologies.