

ACT Australian CleanTech Index

2011-12

Annual Performance Report

July 2012

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1. ACT Australian CleanTech Index Overview

The ACT 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, Green Buildings & Biomaterials
Biofuels	Energy Storage & Fuel Cells
Water	Wave, Tidal & Hydro
Environmental Services	Biogas
Low Emissions Vehicle Technologies	Geothermal – Hot dry rocks and conventional
Carbon Trading	

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 over 70 companies falling under the coverage of the Index and with a combined market capitalisation of over \$6Bn, the ACT Australian CleanTech Index presents for the first time a 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 S&P/ASX200 and the S&P/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 section 5 of this report.



The ACT Australian Cleantech Index is updated each month and published on the Australian CleanTech website at www.auscleantech.com.au, in the *Ethical Investor* magazine, in WME's *Environmental Management News* and in the international *Cleantech Investor* magazine.

Monthly results can be emailed directly to interested parties by subscribing at <http://www.auscleantech.com.au/Pages/cleantech.html>.

2. ACT Australian CleanTech Index Performance 2011-12

ACT Australian CleanTech Index underperformed against the S&P ASX200 and the S&P Small Ordinaries for the month of June 2012. After disastrous results in May and June, it also underperformed against both of its benchmarks over the fourth quarter of 2012 and over the full fiscal year.

The ACT Australian CleanTech Index fell from 34.7 to 32.1 over the month of June recording a 7.7% loss and reaching its all time low. This compared to the S&P ASX200 loss of 0.4% and the S&P ASX Small Ordinaries Index loss of 5.0%.

Over the fourth quarter of the 2012 fiscal year, the ACT Australian CleanTech Index recorded a huge loss of 21.9%, compared with the 5.5% loss by the S&P ASX200 and the 15.7% loss by the S&P ASX Small Ordinaries.

Over the second half of the 2012 fiscal year, the ACT Australian CleanTech Index recorded a loss of 13.7% compared with the 0.6% loss by the S&P ASX200 and the 3.9% loss by the S&P ASX Small Ordinaries.

Over the 2012 fiscal year, the ACT Australian CleanTech Index recorded a loss of 30.3%, lagging behind the S&P ASX200's loss of 9.6% and the S&P ASX Small Ordinaries' loss of 15.0%.

Percentage Change	FY07	FY08	FY09	FY10	FY11	JUN'12	4Q12	2H12	FY12	3Yrs
ACT Australian CleanTech Index	42.9%	-16.0%	-38.7%	-32.0%	-8.1%	-7.7%	-21.9%	-13.7%	-30.3%	-56.4%
Australian CleanTech 20	56.4%	-21.4%	-37.8%	-16.3%	-17.6%	-7.7%	-21.5%	-11.6%	-29.2%	-60.1%
S&P/ASX200	25.4%	-16.4%	-25.8%	11.8%	4.2%	0.4%	-5.5%	0.6%	-9.6%	5.3%
S&P/ASX Small Ords	40.4%	-23.0%	-32.4%	10.5%	9.5%	-5.0%	-15.7%	-3.9%	-15.0%	2.9%

The market capitalisation of the 72 stocks in the ACT Australian CleanTech Index after its rebalancing is A\$6.3 billion falling from its peak of \$16.3 billion in July 2007 and recording a new low for the index.

The irony of this happening on the day that the Carbon Price becomes effective will presumably be amusing in hindsight!!

The month's performance was driven by weak results from SWW Energy Limited, Island Sky, CMA Corporation, Medivac, Torrens Energy, Green Rock and Hot Rock. These losses were partially offset by gains from Sterling Biofuels, Intec, Orocobre and Soil Sub Technologies.

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

Fourth Quarter FY12		
Worst Performers Share Price Loss > 50%		Best Performers Share Price Gain > 0%
Mission NewEnergy Island Sky CMA Corporation Dolomatrix Medivac	Carbon Polymers Eden Energy RedFlow Green Rock Hot Rock	Sterling Biofuels Novarise Renewable Resources Bluglass Pacific Energy Environmental Group
Second Half FY12		
Worst Performers Share Price Loss > 50%		Best Performers Share Price Gain > 25%
Dyesol Mission NewEnergy Hydrotech International Island Sky CMA Corporation Dolomatrix Medivac	Carbon Polymers Cardia BioPlastics Eden Energy RedFlow Green Rock KUTh Energy	EnviroMission Sylex Systems Sterling Biofuels Water Resources Group CleanTeQ Orocobre Pacific Energy
Full Year FY12		
Worst Performers Share Price Loss > 50%		Best Performers Share Price Gain > 50%
Dyesol Solco CBD Energy SWW Energy Limited Australian Renewable Fuels Mission NewEnergy Hydrotech International Island Sky Dolomatrix	Carbon Polymers Eco Quest Eden Energy RedFlow Carnegie Wave Energy Green Rock KUTh Energy BioProspect Soil Sub Technologies	EnviroMission Sterling Biofuels CleanTeQ Pro-Pac Packaging Traffic Technologies

Index Rebalance

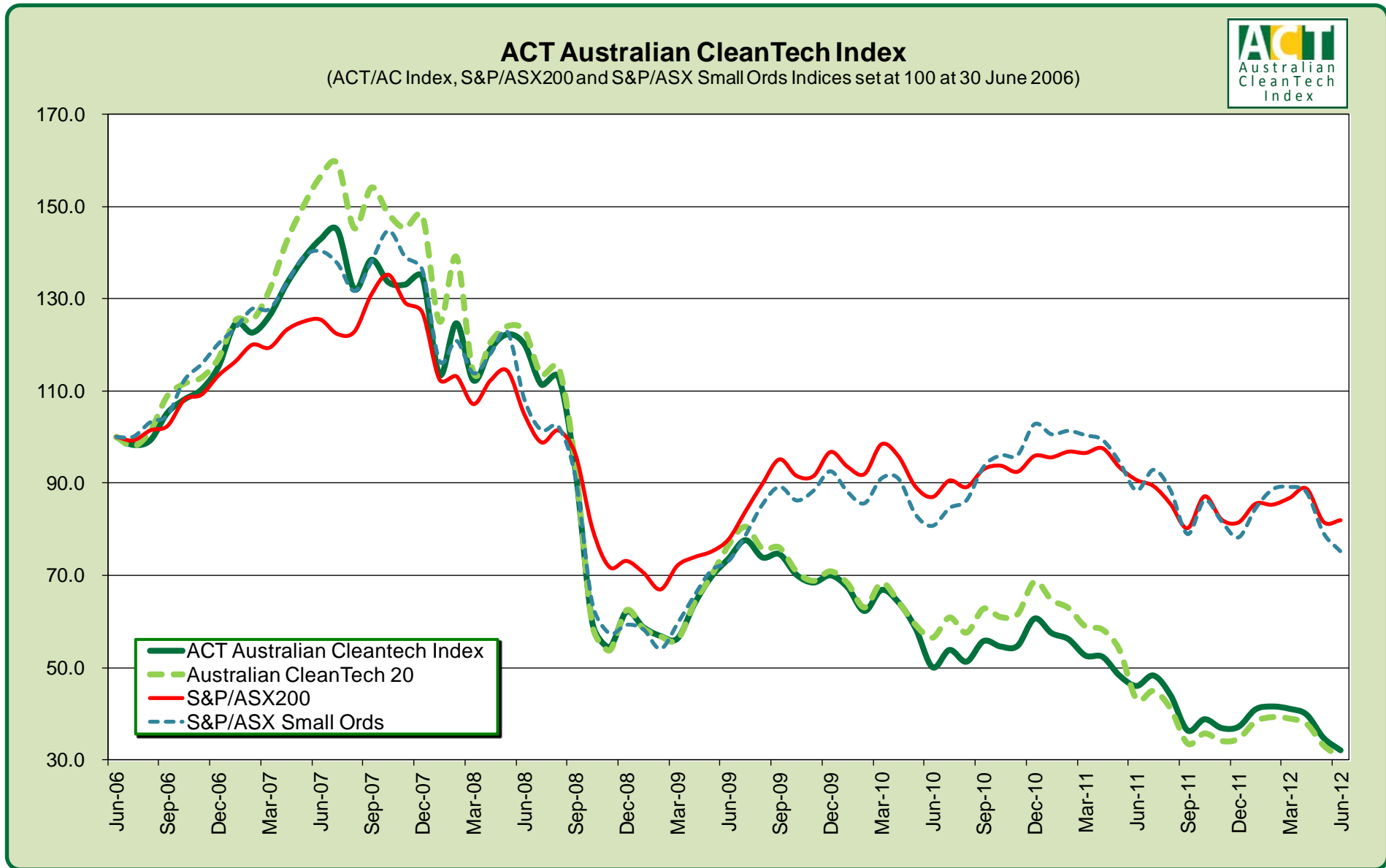
The ACT Australian CleanTech Index underwent its quarterly rebalancing at the end of June which took account of recent share issues and other corporate activity.

The changes that were made to the index constituents at this rebalancing were:

- the removal of **Hydromet Corporation Ltd (ASX:HMC)** after investor Simon Henry reached the 90 per cent level of ownership, which will see him compulsorily acquire all outstanding shares. The company was suspended from official quotation on 29 June 2012.
- the removal of **Hydrotech International Ltd (ASX:HTI)** after the sale of its assets in a Management Buyout led by director Dr Francis Lung for \$1 plus the assumption of debts and future costs of between \$215,000 and \$465,000.

A watching brief is being maintained on the following companies that are currently included in the Index:

- **Green Rock (ASX:GRK)** which is buying into an oil and gas exploration project in the Kimberly region of WA.
- **BioProspect (ASX:BPO)** which has bought into an oil and gas exploration project in the Phillipines through its investment in Frontier Gasfields.



3. Component Sub-Indices

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

ACT Australian CleanTech Sub-Indices

	FY07	FY08	FY09	FY10	FY11	4Q12	2H12	FY12
ACT Solar Index	36.5%	-31.1%	86.7%	-35.1%	-40.8%	-15.1%	16.7%	-5.7%
ACT Wind Index*	73.3%	-28.3%	-29.0%	-40.1%	-24.4%	-	-	-
ACT Biofuel Index	-46.2%	-55.5%	-60.4%	12.8%	-24.5%	-33.9%	-46.0%	-44.8%
ACT Water Index	32.9%	-18.9%	-25.2%	-22.8%	19.8%	-18.6%	37.7%	1.6%
ACT Waste Index	56.3%	-0.4%	-44.3%	-35.0%	-3.3%	-25.7%	-18.3%	-36.9%
ACT Efficiency/Green Buildings/Biomaterials/ Energy Storage/Fuel Cells Index	58.5%	-47.1%	-65.1%	6.2%	-1.2%	-16.9%	-10.8%	-23.5%
ACT Geothermal Index	205.9%	-29.6%	-38.9%	-57.3%	-18.6%	-30.4%	-33.2%	-44.7%
ACT Environmental Services Index	12.1%	-34.1%	-6.7%	-52.6%	-25.2%	-40.1%	-16.7%	-29.8%

*: ACT Wind Index discontinued on 1 July 2011 due to too few companies

All of the sub-indices recorded losses over the fourth quarter of the 2011-12 fiscal year. Other than the ACT Solar Index and the ACT Water Index, these gains were also reflected in half year and full year losses.

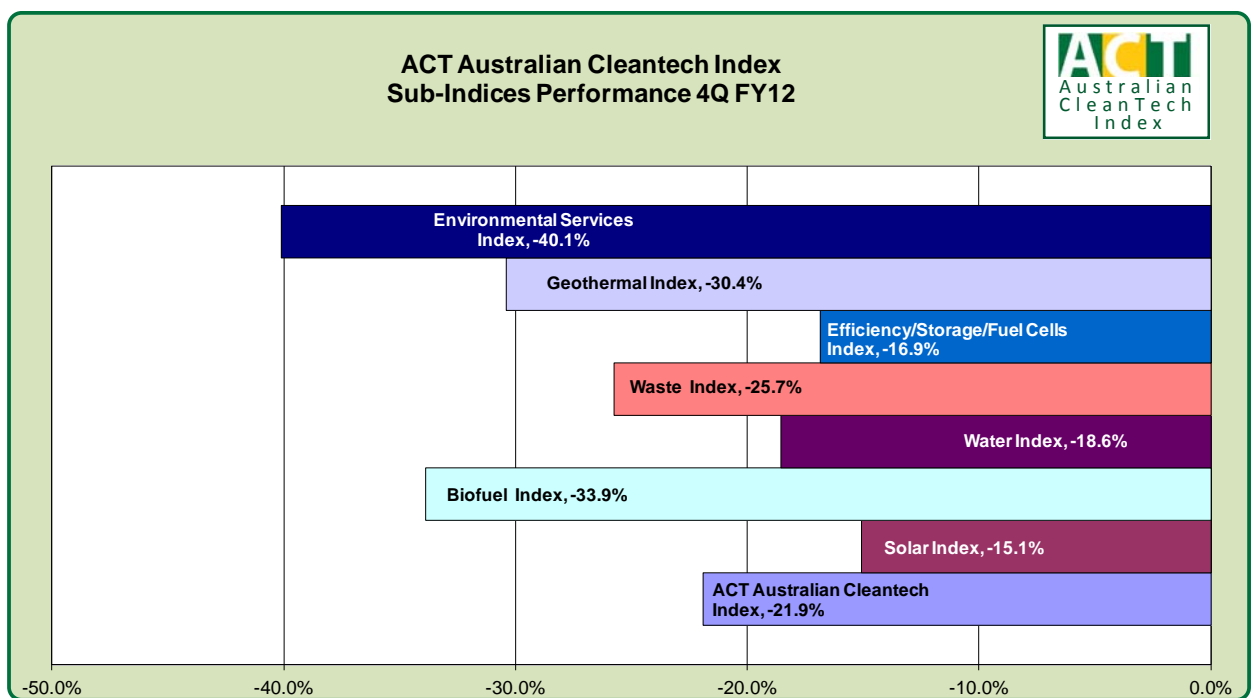
The overall collapse of the ACT Australian Cleantech Index has not been driven by the decline of only a few sub-sectors. It is clear from these numbers that there have been across the board losses, with a few minor exceptions.

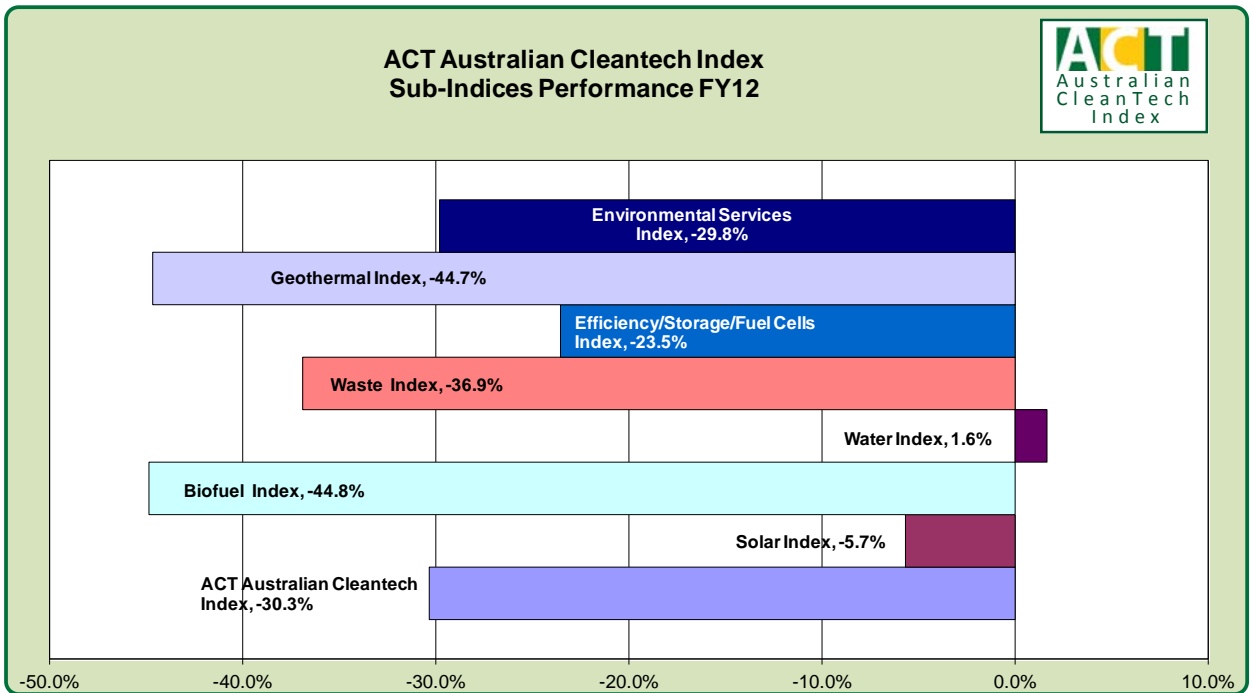
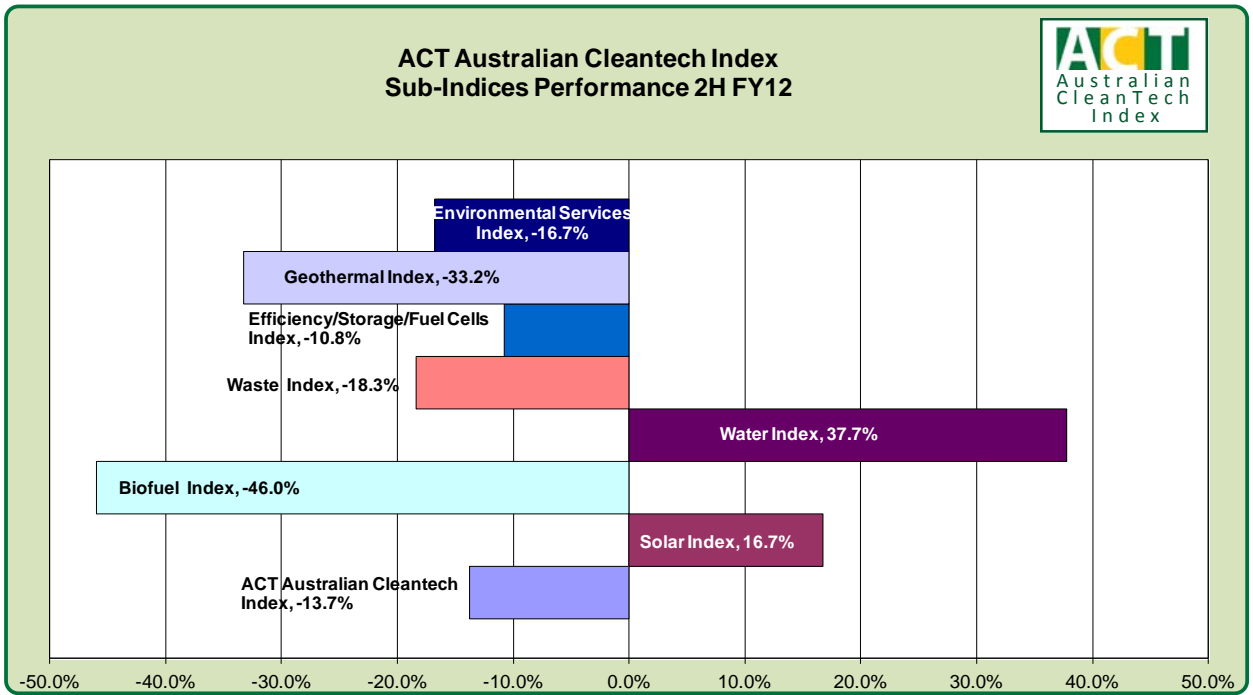
This collapse may be being caused by a number of key issues:

- Ongoing market instability that hits smaller and non-revenue earning companies harder than the general market;

- Ongoing uncertainty regarding carbon pricing (despite its legislation) and increasingly vocal opposition from industries that may incur consequent profit impacts;
- A continued campaign by major media outlets such as News Ltd against climate change and environmental mitigation measures;
- A consequent general community move away from environmental issues and climate change as a significant issue with greater emphasis being placed on mining, taxes and healthcare; and
- Increasingly vociferous and ill-informed political positions by State and Federal politicians that see short term political gains from posturing against environmental industries.

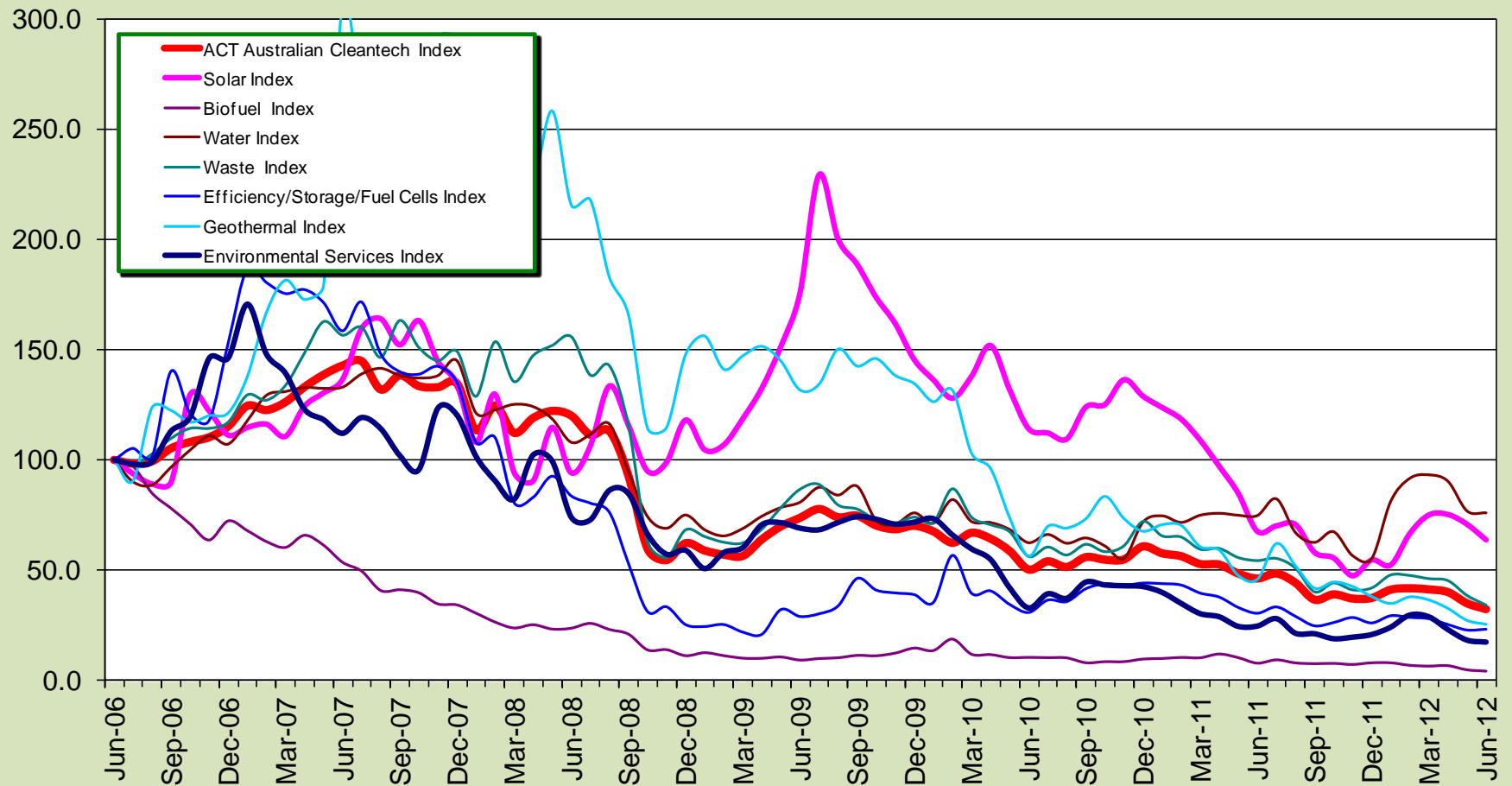
The 4Q12, 2H12 and the FY12 results are shown on the bar charts below.





ACT Australian CleanTech Index Sub-Indices Chart

(ACT/AC Index and all ACT Cleantech Sub-Indices set at 100 at 30 June 2006)



4. Component Companies on 30 June 2012

The largest 20 largest Index constituents by market capitalisation on 30 June 2012 are provided in the Table below.

Market Cap Ranking	Company	ASX Code
1	Sims Metal Management	SGM
2	Transpacific Industries	TPI
3	Sylex Systems	SLX
4	Energy Developments	ENE
5	Tox Free Solutions	TOX
6	Galaxy Resources	GXY
7	Orocobre	ORE
8	Pacific Energy	PEA
9	Infigen Energy	IFN
10	Nanosonics	NAN
11	Ceramic Fuel Cells	CFU
12	Coffey Environments	COF
13	Pro-Pac Packaging	PPG
14	Novarise Renewable Resources	NOE
15	Gale Pacific	GAP
16	CO2 Group	COZ
17	Wasabi Energy	WAS
18	Geodynamics	GDY
19	Carnegie Wave Energy	CWE
20	CMA Corporation	CMV

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

5. Overview of Index Rules

Criteria for Inclusion

To be included in the ACT 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 ACT Australian CleanTech Index and the eight 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 30 June 2006.

Number of Shares

The number of shares used in the calculation of the market capitalisation of each company is based 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 ACT 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 ACT 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 ACT 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 ACT 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.