

Australian Cleantech Competition 2013 - Semi Finalist Overviews

Ref	Name	Company	State	Category	Sector Awards					Concept/Product Description
					R E	F & B	M I N	M A N	B E	
71	Giles Bourne	BluGlass Limited	NSW	Energy Efficiency	Y			Y	Y	BluGlass is a semiconductor company bringing to market a breakthrough in the LED lighting and solar industries called Remote Plasma Chemical Vapour Deposition (RPCVD). RPCVD is a revolutionary approach to the manufacture of group III nitrides which are essential components of millions of electronic and power devices.
61	Shawn Ryan	Bombora Wave Power Pty Ltd	WA	Renewable Energy	Y					Bombora Wave Power has developed a novel wave energy convertor that converts the ocean's swell into a fossil fuel free source of cost effective electricity. Through a sturdy, seabed mounted design and flexible membrane, we're able to withstand storms and harness a greater proportion of the available wave energy.
63	Keith Johnson	Commercial Diving Services Pty Ltd	NSW	Energy Efficiency				Y	Y	HST assists ships to travel faster through the water, consume less fuel and emit lower green-house gases, ensuring that their hulls are clean and smooth - free from fouling organisms such as slime, algae, weed and/or molluscs - through the application of heated sea water within a patented underwater device which travels along ships' hulls.
37	Kristian Handberg	DiUS Computing	VIC	Smart Power, Green Grid, Energy Storage	Y			Y		DiUS Computing's ChargeIQ is a world-leading home charging solution for plug-in electric vehicles. ChargeIQ seamlessly integrates the driver, vehicle and the grid to minimise the costs of charging for vehicle owners, utilities and society more generally.
66	Richard Romanowski	Elevare Energy	QLD	Smart Power, Green Grid, Energy Storage	Y	Y	Y	Y	Y	An Australian power electronics company using its technology to make energy storage with batteries commercially viable reducing GHG's and rising power prices. Solutions include community energy storage and the dSTATCOM that solves Power Factor Correction and other issues in commercial sites.
27	Stuart Eastaugh	F Cubed Australia	VIC	Air Water & Waste		Y	Y	Y	Y	F Cubed's unique technology is a solution to the world's water issues only using natural renewable solar energy. F Cubed panels produces pure clean drinking water, from any feed water source by bio-mimicking the natural water cycle of evaporation and condensation; also producing a secondary water supply of UV disinfected, heated, and filtered water, precipitating inorganic compounds and leaving no waste.
89	Paul Smyth	Global Future Solutions	QLD	Air Water & Waste			Y			Global Future Solutions (GFS) is an Australian Biotechnology company producing environmentally safer products for the Oil & Gas, Poultry, Life Sciences and Sanitation Industries. Our patented products address the potential contamination in these industries and have worldwide application. In particular, GFS MEGR 102 is an environmentally friendly fracking fluid designed to replace the toxic biocides currently used in the unconventional gas industry worldwide. This is one of the key issues opposing the unconventional gas industry. It is not only safe but more effective than currently used toxic formulations.
41	David Ye	Imaca	VIC	Renewable Energy	Y				Y	Neopower solar hot water uses highly efficient evacuated tube solar collector to collect the sun energy. When the solar controller senses the collector is heated by the sun, it will give a signal to a circulation pump, then the pump pushes water through the solar collector, transferring the captured heat into the water.

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83	Varan Sureshan	Katru Eco Inventions	NSW	Renewable Energy	Y				Y	The IMPLUX™ Wind Power Turbine (IMPLUX) is an internationally patented, distinctly unique cutting edge technology that delivers power from turbulent winds in the urban environment. It is a highly efficient technology which captures the limited urban wind resource. IMPLUX overcomes the shortcomings of existing turbines for urban applications including poor efficiency, safety, noise and aesthetics via a radically different next generation design developed specifically for multi-storey buildings.
17	Aldo D'Eramo	MicroHeat Technologies	VIC	Green Building					Y	MicroHeat Technologies (MHT) develops advanced fluid heating technologies, that is patent (PCT) protected globally and delivers energy optimisation & water consumption reduction. The Technology uses a 'direct energy transfer' method of heating to for point of use appliances with a small footprint .
81	Braden Kidd	New Wave Power Systems	VIC	Energy Efficiency	Y				Y	The DC HYBRID Power Transmission System is designed to achieve optimum efficiency when integrating energy generation, storage and consumption within a building. The system allows a premise to use renewable- generated (DC) energy either directly - for example to power lighting - or by storing the energy for possible back-up power, UPS or peak time load-shifting.
29	Craig Richmond	Nexus eWater	ACT	Energy Efficiency					Y	Nexus eWater is commercialising products that will transform the energy and water performance of homes by unlocking the value of grey water, an abundant and largely untapped resource found in every home. These innovative products will deliver high-efficiency hot water using heat recycled from grey water, and high-quality treated water for non-potable uses such as toilet flushing and garden irrigation.
55	Vahid Vakiloroyaya	Oracle Air Conditioning Services	NSW	Energy Efficiency				Y	Y	Air-conditioning units are least efficient at high ambient temperatures, when cooling demand is highest. We have developed a new hybrid chilled-water evaporative cooling technology. We have named our technology as an 'ultra cooler' because of its performance capabilities relative to other evaporative cooling products.
8	Mark Davidson	Organic Response	VIC	Energy Efficiency					Y	Organic Response is a revolutionary lighting control system using Distributed Intelligence to deliver maximum energy savings with optimal occupancy comfort. Uniquely, the technology requires no additional design, hardware, wiring or commissioning to install. The system allows other building management systems to access and exploit its real time, location specific occupancy information to make more intelligent decisions and improve their own energy efficiency.
36	Michael Trenberth	Oztren Industries	SA	Renewable Energy	Y					Rotogen is a variable pitch vertical turbine system that is self regulated and dynamically adjusts to the wind in gusty conditions, making it safer and able to work in a wider range of weather conditions. It is reliable in extreme weather and outperforms all other vertical turbines for total variability both in blade adjustment and grid tie power production.
57	Phillip Henshall	PCM Technologies	SA	Energy Efficiency		Y				Our concept is an efficient thermal storage system for medium temperature (0 to 8 dg) commercial refrigeration applications using phase change materials (PCM). During the night in low ambient temperature a standard refrigeration plant will freeze the PCM material within the thermal storage unit reducing energy demand and costs.

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49	Peter van Bruchem	Positive Recycling	WA	Air Water & Waste			Y			Positive Recycling delivers a Used Battery Collection Service that provides a convenient, safe, environmentally appropriate, regulation compliant solution for the collection, storage and transportation for recycling of Used Lead Acid Batteries (ULABs). At the core of this service will be the Positive Pallet which is a specially designed, enclosed, banded, signed, front loadable, collapsible, dangerous goods Pallet.
50	Robert Bosshard	PTronik	NSW	Energy Efficiency				Y		The pMC Master Controller is an Environmental Dust Management System, developed by Ptronik, to significantly improve efficiency in Industrial Dust Collectors. The 'pMC' is a breakthrough technology that collects and uses real time plant data to automatically monitor and control the cleaning process thereby optimizing plant performance.
84	Dorin Preda	Q Solar	QLD	Renewable Energy	Y					Q Solar's high efficiency solar heaters have multiple applications in industry, agriculture and for heating of all size buildings. The new solar heaters are easy to retrofit to existing fuel burners and can be used to preheat the air of combustion and decrease fossil fuel consumption and pollution.
74	Bob Cart	RayGen Resources	VIC	Renewable Energy	Y		Y			RayGen is creating the lowest cost power generation technology in the world - and it's renewable. RayGen's solar technology combines the most efficient solar cells (>44%) with mirrors, the lowest cost and most efficient collector. Unlike all other PV systems, RayGen separates collector and generator to optimize each independently. This provides a breakthrough in cost reduction.
59	Lachlan Blackhall	Reposit Power	ACT	Smart Power, Green Grid, Energy Storage	Y				Y	Reposit Power has developed a 'Batteries-as-a-Service' platform to enable electricity retailers to put a battery in every home to solve a number of technical and commercial challenges faced in the electricity grid. The Reposit Power platform manages residential energy storage to deliver energy, power and other services that create savings and produce additional revenue streams for retailers and consumers in the National Electricity Market (NEM).
58	Chris Gilbey	SAMEC	NSW	Renewable Energy	Y					SAMEC is developing wirelessly connected, solar powered, devices that are part of an 'internet of things'. The first is My Free Power, which integrates a smartphone app, Bluetooth technology and the latest organic photovoltaic solar cell technology in a smartphone protective case. The product will share information about the user's power savings via social media by showing the amount of CO2 savings taking place and promotes peer networking to increase power savings and help market the product.
88	Christopher Matthews	Silenceair	NSW	Energy Efficiency					Y	Silenceair has developed an award winning technology platform that targets the rapidly expanding 'Green Building' ventilation market, currently estimated to be worth \$15 B in the USA alone. Our products enable architects, engineers and builders to create low cost, energy efficient, fresh air ventilation systems for buildings in noise-affected environments that would otherwise require expensive and energy hungry mechanical systems to provide the necessary ventilation.
48	Lisa Horton	SmartBurn International	WA	Air Water & Waste					Y	The SmartBurn device is a combustion catalyst for wood heaters. Based upon a mixture of natural, non-toxic and non-corrosive ingredients the SmartBurn device improves the combustion efficiency of wood heaters and open fireplaces resulting in a 54% reduction in wood particulate emissions from entering the atmosphere and a 17% more effective burn of wood.
43	Daniel Leipnik	Specialty Coatings	VIC	Renewable Energy	Y			Y	Y	EnerSheet™ is a large format resin-impregnated fibreglass composite roof sheeting product with embedded thin film solar photovoltaic (PV) material. EnerSheet™ is easy to install and is Australia's only building-integrated PV (BiPV) roofing material.

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65	Michael McCann	Uniflow Power	WA	Renewable Energy	Y					The Uniflow Generator is biomass fuelled, steam driven engine that produces 5kW of electricity, rotary mechanical power, steam, hot water, and other heating services. It is a 21st century steam engine that can be fuelled with the lowest grade fuels to produce renewable energy services on demand.
45	Fiona Waterhouse	Utilitas	QLD	Renewable Energy	Y	Y				Utilitas partners with farmers, food and beverage manufacturers, waste managers, and wastewater treatment plant operators to recycle energy from their organic waste streams to cap their increasing energy costs. Utilitas, a specialist biogas project development company, uses well proven technology and a smart business model to produce competitively priced 'Organic Energy'.
60	Carly Newman	ZEN Energy Systems	SA	Renewable Energy	Y					ZEN has developed a range of 'Intelligent Distributed Energy Storage' systems from Residential to Utility Scale based on a distributed computing architecture that allows for joint participation by all parties. The core is a world leading 'Battery Operating System' (BOS3) that enables a high level of functionality and control together with advanced battery optimisation of large format lithium iron phosphate cells to break through previous cost barriers to storage.
38	Jannie Van Deventer	Zeobond	VIC	Green Building					Y	E-Crete™ is a geopolymer based binder that delivers up to 80% CO ₂ emission savings compared to Portland cement and is capable of meeting the maximum Green Star Concrete Credit performance criteria. E-Crete meets all of the performance requirements of standard N-Grade concretes under AS 1379 and is specified in VicRoads section 703 for General Concrete Paving.
86	Neil Graham	Z-Filter	WA	Air Water & Waste		Y	Y			Z-Filter, separates solids from liquids, by trapping them inside a single, zippered, filter element a 'Sock'. The Z-Filter continuously filters separates, rolls, compacts and compresses the solids inside the sock expelling the liquids to provide a dry cake. Z-Filter's 'Filtration Innovation' is the most efficient means available to separate solids from liquids.