

## Program Summary: ATA Melbourne Project Night 16 June 2010

See also the ATA Melbourne Web site <http://www.ata.org.au/branches/melbourne/>

Name	Title	Description	Contacts	Links
1 Alan Cuthbertson	DIY Double Glazing	My aim was to create a way to add another layer of insulation to existing windows. The main criteria was cheap (<\$100/sq metre), easy, looks reasonable, is removable and does no damage to the existing frame or window. Also it needs to address condensation. My solution is a plastic cover over the wooden frame, a rubber seal and a sheet of glass, all on the outside of the existing window. I am in the process of testing it.	<a href="mailto:alan@sysprosoft.com">alan@sysprosoft.com</a>	
2 Brod Street	Observations of growing edible and non-edible plants on permanent green roofs	Brod will pass on his practical lessons and experience of building four separate green roofs on his home and brick shed. The green roofs range from intensive vegetable gardens and to experimental extensive native roof gardens. By end of 2010 Brod will have a total of 24 m2 of permanent green roofs increasing the area of non-pervious surfaces from 32% to 44% of a 203 m2 site.	Brod Street, 39 Smart Street Hawthorn Victoria 3122. Email: <a href="mailto:bstreet@westnet.com.au">bstreet@westnet.com.au</a>	
3 Chris Moss	ATA International Projects Group	The IPG is a voluntary group of members who travel to poorer countries, mostly East Timor, to install Solar power systems that are requested and funded by other groups, who liaise with groups within the country. We have been going for seven years, and now run a training program for local technicians, have an in country contact. Groups are led by a qualified installer and give members an opportunity to do practical installation work, while building capacity in the country.	Anton Vikstrom, Project Manager ATA Office 96315416 Tuesday-Friday or Chris Moss 0402067141	<a href="http://www.ata.org.au/international-projects-group/">http://www.ata.org.au/international-projects-group/</a>
4 Jack Burger	The quest for a 1kW solar powered stirling engine	Stirling engines were patented in 1816 by Robert Stirling. They are also known as a hot air engine or external combustion engine. They can use energy at a low temperature - as low as a few degrees difference between hot and cold ends. Large solar systems of 5kW are currently built with parabolic dishes. My development is aiming to use concentrated solar heat to power the engine. I am currently testing the two configurations on display. A 1kW engine would cost approximate \$1000 if made in small numbers achieving \$1/watt compared to PV system of \$5/watt.	Jack Burger <a href="mailto:koosburger@bigpond.com">koosburger@bigpond.com</a>	
5 Jim Lambert	Wicking Box Gardens for Veggies	Find out how to use "wicking Boxes" to grow veggies in difficult spots. These can go on a balcony, or over paving. The water "wicks" up through the soil to the plant roots, from a water reservoir of crushed rock in a layer under the soil. Our boxes are made from polystyrene broccoli boxes, and they sit on outdoor tables in the back yard (over the "driveway" entry to the backyard storage shed). The boxes are "water wise" - they use little water (because there is basically no evaporation), and you can tell how much water they need, by seeing how much you need to top it up after a few days. The worms live right there in the bed. You feed them food scraps through a tube. You just choose a place that gets a good lot of sun.	Jim Lambert <a href="mailto:jim_moira_lambert@yahoo.com">jim_moira_lambert@yahoo.com</a>	Scarecrow's Garden <a href="http://scarecrowsgarden.blogspot.com/2008/02/wicking-box-gardens.html">http://scarecrowsgarden.blogspot.com/2008/02/wicking-box-gardens.html</a>

6	Kat Lavers	The Plummery: a small-scale urban permaculture demonstration site in Northcote	The Plummery is a small-scale urban permaculture demonstration site in Northcote, Melbourne. Set on 1/10th of an acre (about 400 square metres including the house!), caretakers estimate that when the full design is implemented it will produce just about all the salad, herbs, fruit, mushrooms, eggs, honey, water, electricity, and a significant contribution of the vegies consumed by the household, as well as recycling all organic waste on site. The existing house has been retrofitted with cheap and simple technologies and now uses just 1.5kWhrs electricity and 90L water per day for two caretakers. The Plummery is also a venue for a budding Community Supported Agriculture food coop and sustainable skills workshops.	Kat Lavers Transition Darebin Initiating Group (transitiontowns.org/ DarebinVIC/), Permablitz designer (permablitz.net), & caretaker of The Plummery.0408 371 081 <a href="mailto:kat.lavers@gmail.com">kat.lavers@gmail.com</a>	<a href="http://southerncrosspermaculture.com.au/">http://southerncrosspermaculture.com.au/</a> <a href="http://permablitz.com/">http://permablitz.com/</a> <a href="http://permaculturemelbourne.org.au/">http://permaculturemelbourne.org.au/</a> <a href="http://permacultureprinciples.com/">http://permacultureprinciples.com/</a>
7	Laurie Phillips	DIY HWS Bypass System	The project was undertaken to prevent water wastage in the bathroom while waiting for hot water to be delivered from the storage tank. The design uses a timer circuit, circulating pump and a disused washing machine solenoid valve assembly. The cycle is initiated from a press button in the bathroom. The timer was adjusted to time required to replace the water in the delivery pipe with hot water at the bath outlet in the bathroom (the longest run). A return pipe run was required in my case because of pressure difference introduced by a 350Kpa reducing valve at the storage tank.	Laurie Phillips <a href="mailto:laurieph@bigpond.net.au">laurieph@bigpond.net.au</a>	
8	Malcom Dow	Grid Connected Solar System at Armadale Primary School	Through 2 grants, the National Solar Schools Program from the Federal Government and the Solar in Schools program from the State Government, our school was able to secure \$60,000 to install a 5kw grid connected system, as well as some energy saving projects such as LED lighting and reflective blinds. With the solar panels came an excellent portal which shows the students how much power is being produced by the panels, as well as a comprehensive education program linked solar and renewable energy.  The whole project has been a great success in highlighting to the school community how such a system can be incorporated, and as a practical teaching tool to increase the awareness of renewable energy among the students.	Malcom Dow <a href="mailto:malnor6@hotmail.com">malnor6@hotmail.com</a> Solar System Installers: iSolar Contact Person: Tom Molloy, iSolar 1300 955 187	<a href="http://www.armadaleps.vic.edu.au">http://www.armadaleps.vic.edu.au</a> <a href="http://www.isolar.com.au">www.isolar.com.au</a>
9	Matt Missen	An investigation of how a Community Garden Project might be established in a neighbourhood	I have been talking to various groups and government organisations to test the waters about how a community garden project might be created in my neighbourhood. I have some ideas (...) but I will keep investigating over the next couple of weeks. My hope is that some other people who may have done something similar could see my project proposal and provide some guidance or advice on how I could make it better...	Matt Missen <a href="mailto:themissenlink@hotmail.com">themissenlink@hotmail.com</a>	
10	Chris & Cate	<i>Green Renters: Sustainable Living with the confines of rental property</i>	Green Renters is for those striving to lead sustainable and ecological existences within the confines of rental property. Frustrated by constantly attending conferences and exhibitions that only provide products and advice to home owners, we provides advice for those who are unable to make major changes to a property but still intend to spend many years and call somewhere home.  We're open for contributors, ideas, comments and proposals for projects, especially conversations about policy relating to renters and landlords.  We are available for workshops, stalls, presentations and panels with a host of tips, advice and home made goodies. Recent activities include workshops in Melbourne and Sydney including the Sustainable Living Festival. We also have a radio segment each week on 94.9 Joy FM and have written articles for numerous publications.	Chris - <a href="mailto:contact@greenrenters.org">contact@greenrenters.org</a> / 0433255721	<a href="http://www.greenrenters.org">http://www.greenrenters.org</a>

11	Michael Jacombs	Proposed Grey Water Irrigation System	<p>The aim of this project is to utilise grey water within an existing garden irrigation system. A 20,000 litre water tank currently supplies the vegetable garden, two plant areas, lawn and toilets. Over the last 5 years this tank has emptied at least twice over every summer period during which time we have had to revert to town water. By integrating filtered grey water into this existing irrigation cycle we will, hopefully, maintain a rainwater reserve for the whole year.</p> <p>Water treatment plants are expensive therefore use grey water neat System should be automatic.</p> <p>Grey water needs to be used or the tank emptied or flushed each day.</p> <p>Water needs to be clean and inflow to tank via a GOOD filtration system.</p> <p>Need to review washing detergents and maintain pH near neutral</p> <p>Diversion valve is required when soil is saturated (during storms etc)</p>	Michael Jacombs <a href="mailto:mjake@internode.on.net">mjake@internode.on.net</a>	<a href="http://www.epa.vic.gov.au/">http://www.epa.vic.gov.au/</a> <a href="http://www.ata.org.au/sustainability/greywater-systems/">http://www.ata.org.au/sustainability/greywater-systems/</a> <a href="http://www.aquaclarus.com/">http://www.aquaclarus.com/</a> <a href="http://www.aquanova.com.au/">http://www.aquanova.com.au/</a> <a href="http://www.nature-loo.com.au/greywater/index.html">http://www.nature-loo.com.au/greywater/index.html</a> <a href="http://nubian.com.au/Residential-Greywater-Treatment-System.asp">http://nubian.com.au/Residential-Greywater-Treatment-System.asp</a> <a href="http://www.biolytix.com.au/residential/home/">http://www.biolytix.com.au/residential/home/</a>
12	Patrick Deasey	Underground pre-cast concrete rainwater tank for small block	<p>Our requirement was a water tank for garden &amp; family use that was eco friendly, would fit a small block, look contemporary and be reasonably priced.</p> <p>The solution was a concrete pre cast tank installed under the driveway. It was fitted with a submersible multistage pump that met noise concerns. Design of the overflow was a particular problem that had to be overcome as the outlet is below street level. I still need help with design and implementation of remote water level indicator and failsafe for water overflow due to a couple of instances of my overflow protection completely draining the tank!</p>	Pat Deasey <a href="mailto:pdeasey@naturelinks.com.au">pdeasey@naturelinks.com.au</a> Naturelinks Landscape Management P/L	
13	Paul Fritze	Solar air heater from recycled aluminium cans	<p>My aim is to construct a solar air heater this season to heat a single room for winter use. I am basing the design on the Canadian 'Cansolair' commercial product which is constructed from recycled aluminium drink cans. I have the cans and polystyrene insulation but want to hear from others with experience with such air heaters to avoid any traps and to inspire me to start! Questions relate to type of radiation absorbent black paint, fan configuration, and expected performance.</p>	Paul Fritze <a href="mailto:pafritze@gmail.com">pafritze@gmail.com</a>	<p>Cansolair <a href="http://www.cansolair.com/">http://www.cansolair.com/</a></p> <p>Beyond Zero podcast with Jim Meaney of Cansolair <a href="http://podcast.beyondzeroemissions.org/index.php?id=85">http://podcast.beyondzeroemissions.org/index.php?id=85</a></p>
14	Paul Fritze	Arduino Microcontroller Board for Data Acquisition & Device Control via Web	<p>Arduino boards are a useful way of building programmable equipment controllers or data acquisition systems. The boards are small, use open hardware &amp; software, and are cheap &amp; relatively easy to set up. They can be configured with different sensors and plugins for WiFi connectivity, GPS, phone connections, motor drives, etc. I'm interested in monitoring daily temperatures and would like to be able to read this info directly from the Web - over WiFi via an iPhone preferably. Remote control of devices is possible as well. If there's interest, a subgroup could be set up to share expertise.</p>	Paul Fritze <a href="mailto:pafritze@gmail.com">pafritze@gmail.com</a>	<p><a href="http://www.arduino.cc/">http://www.arduino.cc/</a></p> <p>Little Bird Electronics: <a href="http://www.littlebirdelectronics.com/categories/Arduino/">http://www.littlebirdelectronics.com/categories/Arduino/</a></p>

15	Peter Wonfor	Proposed installation for a hot water recirculation pump to feed both the MBR ensuite and kitchen taps	Currently 3+ litres of cold water run out before hot water appears. The main features are: * Will use return pipe from solar collector panel as return path for cold water standing in hot water pipe. * Will circulate hot water to taps on both hot water circuits in house. (Conventional retrofit installation serves one only.) * The proposed installation utilises the fact that both the plastic pipe to the ensuite and copper pipe to the solar collector are accessible in the roof space for the "suck" and "blow" connections respectively.	Peter Wonfor <a href="mailto:brewpeter@hotmail.com">brewpeter@hotmail.com</a>	
16	Peter Wonfor	Reducing buildup of stale water in rainwater tank	A description of the extension of the 90mm rainwater tank overflow pipe inside the 9,000 litre tank to the bottom of the tank to realise first-in-first-out use of the water to reduce build-up of stale water. Main features: * First-in-first-out "rotation" of water. * 90mm pipe in tank is configured to raise water level to maximum possible. (Conventional Nylex installation wastes around 450 litres of capacity. * Bottom of overflow pipe is approx. 25mm from floor of tank. This provides suction to (hopefully!) draw out sediment close to the pipe -- to be determined!	Peter Wonfor <a href="mailto:brewpeter@hotmail.com">brewpeter@hotmail.com</a>	
17	Peter Young	The feasibility of a community owned renewable energy-based Micro-Grid at Heyfield, Gippsland	The Gippsland Climate Change Network is a not-for-profit organisation that brings government, business and community together in a forum for action and discussion about climate change. GCCN has received approval from the Heyfield Community Resource Centre to manage the next stage of discussion and potentially to project manage the program with an appropriate partnership.	Scott Ferraro, EO GCCN  Peter Young, Primaform 03 9593 6991 or 0408 44 7771	
18	Rhys Freeman	CERES Electric Delivery Van - Citroen Berlingo conversion	A Citroen Berlingo has been converted by CERES with the assistance of the Swinburne TAFE School of Engineering. The vehicle has been engineered to meet VicRoads compliance requirements, and is now registered by VicRoads as an 'electric drive' vehicle. CERES has developed a lot of knowledge about converting vehicles, and is about to convert another vehicle, a Mercedes Sprinter Van (2001).	Rhys Freeman - <a href="mailto:rhys@ceres.org.au">rhys@ceres.org.au</a> Bryce Gatton - <a href="mailto:bryce@ceres.org.au">bryce@ceres.org.au</a>	<a href="http://www.ceres.org.au/">http://www.ceres.org.au/</a>
19	Stefan Smolenaers & Matt Femino	2010 Team Swinburne Electric FSAE Electric Vehicle Proposal	The project is to design and develop a high quality formula spec electric car for the 2010 Formula Society of Automotive Engineers (S.A.E) competition, as well as hill climb and motorkhana events. The car is designed to be competitive with current petrol SAE cars, with a similar power to weight ratio and similar handling ability. It will act as a "test bench" for research applicable for use in a commercial electric car. This project is completely not-for-profit and will be fully designed and implemented by a team of final year, PhD and Post Graduate Mechatronics, Mechanical and Electrical Engineers at Swinburne University.	Stefan Smolenaers <a href="mailto:stefan.skos@gmail.com">stefan.skos@gmail.com</a> Matt Femino <a href="mailto:femno@hotmail.com">femno@hotmail.com</a>	