



Benalla Sustainable Future Group

Newsletter 6

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Benalla Sustainable
Future Group Inc.

PO Box 642

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President's Column

Last month (April) the UN Intergovernmental Panel on Climate Change released its fifth assessment report on the science and impacts of climate change which confirmed and reinforced the findings of the previous assessment report published in 2007. In this report the IPCC is more certain than ever that climate change is occurring as a result of human activities.

There is increased evidence that climate change is already affecting many natural and human systems and poses significant risks to human health, ecosystems, infrastructure, agricultural production and communities.

Threats identified for Australia include more coral bleaching of the Great Barrier Reef and drier conditions in south western and south eastern Australia resulting in increased bush fire risk and marked decreases in agricultural production. Reducing the risk of these threats will depend on how rapidly we are able to reduce carbon emissions, locally and globally, and how effectively we are able to implement adaptation measures. A more detailed summary of this report can be found in the following pages.

When Prime Minister, Tony Abbot, was asked for a response to the report he said, "Australia is a land of droughts and flooding rains. Always has been, always will be." It seems that Dorothea Mackellar, who wrote the poem 'My Country' in 1905 from which the Prime Minister is quoting, has more influence on him than the IPCC which is the most authoritative international body on climate change science and impacts.

The editorial in 'The Age' on 4th April has this to say about the Prime Minister's response:

"The nub of the (IPCC) report is that these impacts are *already* being felt. To deal with them, therefore, requires strong commitment rather than prevarication; in other words, decisive leadership.

"The Prime Minister, however, dogmatically prefers the past tense to the present indicative. He still indulges in sterile and pointless debate in the face of sustained and perhaps irreversible damage to our planet. In the process, Mr Abbott prevails against the judgement of science and the force of popular opinion. *This is not true leadership: that happens when governments; sometimes taking risks for the greater good of community and country, look beyond ideological and political differences. True leadership, which emerges in time of cataclysmic disaster and times of war, should also be deployed in gauging and attempting to control the most critical environmental challenge of our time.*"
(My emphasis)

John Lloyd



Tanberg, The Age, 1/4/14

Next General Meeting
Benalla Sustainable Future Group Inc.
Thursday 26th June at 7.30 pm
Uniting Church Hall, Carrier Street, Benalla

IPCC Fifth Assessment Report

This report on the impact of climate change was released at the beginning of April and is the result of years of work by 309 leading global researchers. The report found that climate change is already being felt in all corners of the globe and some parts of the natural world may already be changing irreversibly. The report stresses the likelihood of an increase in severe and irreversible damage to the planet if high greenhouse gas emissions continue and the planet warms significantly.

Dr Chris Field, co-chairman of the research team behind the report says that climate change is not something that is far off into the future as widespread impacts of climate changes that have already occurred can be readily seen around the world. These include changes to water systems, wildlife and crops. There are also early warning signs that Arctic sea ice and corals are already changing irreversibly.

Changes already observed in Australia include the warming of surface air and oceans, the shifting of ocean climate zones and changes to rainfall patterns.

Threats for Australia identified by the report include:

- Marked decreases in agricultural production in the Murray-Darling Basin and SW and SE Australia if projections of severe dry conditions are realised.
- Risks of increased loss of life, damage to property, economic loss due to bushfire in southern Australia.
- Increased hot weather to hit major population centres, with hot days, for example, in Melbourne expected to increase by 20 to 40% by 2030.
- The iconic Great Barrier Reef is under threat. Under current rates of ocean warming and acidification, coral reef systems could be eliminated by mid- to late-century.
- There are risks from increased frequency and intensity of flooding from extreme rainfall events, causing damage to infrastructure.

The report identifies eight global risks it considers highly probable and irreversible. They include death, injury and disrupted livelihoods due to storm surges; coastal flooding and sea-level rise in low lying areas; breakdown of critical services such as electricity, water supply and emergency services due to extreme weather; food insecurity due to warming; drought, flood and extreme rainfall, particularly in poorer countries.

As climate change worsens during this century further threats to the world include a rising risk of species extinction; the effect on crops; displacement of more people and significant economic losses. The world's poor will be most under stress as the impacts of climate change multiply their problems. However the impact of recent bushfires and floods show lack of preparedness in all countries regardless of development.

A further section of the report about ways to cut greenhouse gas emissions was released in mid-April. It stated that the world will probably need to embrace new technologies that suck carbon dioxide out of the

atmosphere and bury it underground if it wishes to avoid ecological catastrophe. It also says that while action to combat global warming should begin now, the cost of a greener, healthier future will be surprisingly small.

The report found that large scale changes in energy systems and, potentially, land use are required to keep global warming to just 2 degrees higher than the pre-industrial world. The key is to "decarbonise" electricity generation which will have flow-on effects in industry, buildings and transport. By 2050, low-carbon electricity generation – from renewables, nuclear or carbon-capture sources – must increase from the current 30 per cent to more than 80 per cent of total power generation. And by 2100 there must be no use of fossil fuels at all, in order to hit the 2-degree target.

Because of the time it will take to switch to a clean economy, the report projects the need for BECCS technology – bio-energy with carbon capture and storage. BECCS uses trees and crops to extract carbon from the atmosphere, burns them for fuel, then captures the emission and buries it underground for centuries. While the report says there was limited evidence on the potential for large-scale deployment of this technology many future scenarios require it to work to prevent further warming.

(Much of the material for this article comes from articles by Environment reporter Tom Arup in The Age on April 1 and 14)

John Lloyd

What Does the Budget Mean for Solar?

The budget is all over the news, and the analysis is everywhere - it's good; it's bad; it's broken promises; it'll clean up a mess. But the question remains - what does the budget mean for solar?

Before the election, Tony Abbott promised 'A Million Solar Roofs', a program to install solar on a million more solar homes. But, in yesterday's announcement, there was no mention of a million solar roofs - and the program seems to have quietly disappeared.

Instead, we heard that the Australian Renewable Energy Association (ARENA) - previously established with bipartisan support - has been axed. And, along with it, the 190 renewable energy projects in development, worth approximately \$7.7 billion.

ARENA provided funding for renewables projects, including big scale and community solar. And a million more solar roofs would mean millions more Australians running on the sun.

If the Government wanted to grow solar, create more jobs and ensure families can take real power over their bills, they would have kept these programs - not axed them. It looks like the real winners in this budget are big energy companies who want to kill solar.

Lindsay from solarcitizens.org.au

Products for a Sustainable Lifestyle

Information on these products is from *ReNew* magazine published by the Alternative Technology Association.

Non-toxic simple wood treatment

Eco Wood Treatment is a low-toxicity water based timber stain and preservative for use on previously untreated timbers. It is supplied as a powder composed of natural substances from minerals. It contains no solvents and leaves no harmful residue in water or soil.

You simply mix the powder with water and apply directly to clean wood only once for the life of the timber. It soaks in and gives the wood a silvery patina after time, making the wood resistant to rot and fungal attack, even if buried in soil. It is ideal for new or untreated wood, weatherboards, decks, fences, posts, doors and windows, wooden planters, garden surrounds or anywhere wood is subject to the outdoors. For more information see:

www.harmlessolutions.co.nz
or www.ecowoodtreatment.com

Stop convective heat loss

If your home has a roof-mounted air conditioning system, especially if it is an evaporative system, then you may be losing a lot of winter warmth out through the ceiling vents, even if the winter baffle is closed.

Ecomad supplies the AC Draftshield range of air conditioner vent covers to many common sized ceiling vent grilles. The covers are moulded in transparent plastic so they are less noticeable and they feature a foam seal around the perimeter to allow for better sealing and to protect the ceiling from marks.

The covers are available in both square and rectangular shapes. Square covers come in 30, 37, 45 and 67 cm square sizes and rectangular covers are available in 20 x 40cm and 45 x 62cm sizes.

For more information and to buy see:
www.acdraftshields.com.au

Great coffee, less energy use

The ROK Espresso Maker from Presso Ltd is a compact espresso maker that is almost completely human powered. The only energy input is to make a small amount of boiling water – the rest is done using elbow grease. The unit is made almost entirely from high grade metal, making it almost completely recyclable, and being far smaller than an electric coffee machine, it is ideal for homes with limited space and for people on the move.

The ROK comes in a reusable metal storage tin and includes all needed accessories: Portafilter, stainless steel milk frother, single espresso splitter, tamp/spoon and instruction booklet. It comes with a ten-year warranty.

For more information see:
www.espressounplugged.com.au

10 ways that Climate Change will affect you

1. Rising power bills (in summer)

With temperatures set to rise between 0.6 and 1.5 degrees by 2030, your air-conditioning bills will rise. On the plus side, heating costs may go down. Heating and cooling account for 15 to 25% of typical household electricity use.

2. Restless nights

Ditch your doona. Extreme heat records at night have outnumbered extreme cold records by five to one since 2001.

3. Crowded beaches.

Rising sea levels will put extra pressure on our beaches. Storm surges will continue to cause erosion. Where will you put your towel?

4. High-speed windscreen wipers

Rainfall is likely to become more intense. This will mean more flash flooding and using the high-speed setting on your windscreen wipers as short sharp downpours become part of life.

5. Infrastructure chaos

Expect more rail outages due to extreme heat, water shortage due to failure in treatment plants from bushfires or floods and airport delays due to storms.

6. Going on a holiday?

You had better go soon. Ocean acidification and rising temperatures are expected to have a huge impact on the Great Barrier Reef. The Gold Coast has been identified as vulnerable due to the concentration of coastal development. The Kakadu wetlands may be subject to increased saltwater intrusion from higher sea levels, affecting the delicate balance of the ecosystem.

7. Increases in food prices

If the driest scenarios eventuate, there will be increased pressure on the Murray-Darling Basin where a third of our food is produced.

8. How will your garden grow?

If you're a green thumb you've probably noticed changes to the flowering time of some plants. Warmer temperatures mean some species will bloom earlier and for longer while other plants will wither in the bed.

9. High fire danger

The number of days with very high and extreme fire weather is expected to increase which will lead to increased building costs in bushfire-risk zones and still more pressure on firefighting services.

10. Health concerns

Heatwaves may result in more hospitalisations and deaths. In the week before the 2009 Black Saturday bushfires, the number of calls to ambulances in Melbourne increased by almost 50% over the three hottest days.

Review of Renewable Energy Target

Most people would be aware that Australia has a Renewable Energy Target (RET) designed to encourage additional investment in renewable energy generation. It does this by requiring wholesale electricity consumers (mainly big power retailers) to purchase a certain percentage of renewable energy, which increases each year. This incurs a cost to retailers - companies like AGL and Origin - which is passed on to consumers through electricity bills. The current target is 20% from renewables by 2020.

Many may also be aware that the Federal government has initiated a review of the RET to consider if any modifications are needed. Such reviews are required every two years by legislation. However the composition of the review panel appointed by the government seems to indicate that the weakening or even abolition of the RET is a distinct possibility. Chair of the panel is Dick Warburton, a senior business figure and a self-proclaimed climate sceptic, and the three other members are all engrossed in the traditional fossil fuel energy system and not known supporters of renewable energy.

The Prime Minister has said the scheme needs to be reviewed because it is causing 'pretty significant price pressure'. The government is also getting pressure from large energy companies claiming that the RET is hurting their profits.

The last national review of the RET was conducted by the Climate Change Authority (which the Prime Minister has promised to abolish) and completed in December 2012. It found that the average Australian household would only save \$15 per year from 2013 to 2031 if the RET was scrapped and recommended that the 20% target be maintained. Despite that recent report the government is still claiming that the RET is having a considerable impact on power prices and the review will focus on this issue.

So what does the renewable target cost us? Currently, around 3-4% of power bills can be attributed to the Renewable Energy Target. For a typical residential consumer, that works out to be about \$50-\$70 per year, out of an average bill of about \$1800-\$2200. But we need to put that into perspective.

Firstly, according to the Australian Energy Market Commission the main reason for electricity price increases is increasing network costs and they will continue to dominate increasing prices. Then, when we consider the way renewables interact with the wholesale electricity market, the overall cost is even less. Adding more renewable energy into the mix of our electricity supplies actually has the effect of *lowering* wholesale electricity prices. It may seem counter-intuitive at first, but it is simply the laws of supply and demand at work.

If you increase supply and competition in a market, prices can be expected to fall. If lower wholesale prices were passed through to consumers, the overall cost of the RET scheme would be even lower.

The existing fossil fuel electricity generators have been hit hard by the impact renewables have had on the market: not only are they being displaced by renewables (rooftop PV in particular) and selling less energy, they are receiving a lower wholesale price. At the same time electricity demand in Australia has been decreasing in recent years. All these issues explain why they see the RET as a threat to their profitability and are pressurising the government.

Recent modelling commissioned by the Clean Energy Council (which represents the renewables industry) provides further evidence of the negative impact of abolishing the RET. The modelling carried out by ROAM Consulting found that having the target in place means average household bills will be \$11 to \$22 a year higher until 2017-18. However by 2020 average household power bills would be \$50 a year lower and an average of \$100 lower after 2020. If the renewable energy target was repealed \$11 billion in new investments in renewable energy projects would not go ahead and Australia's cumulative greenhouse gas emissions would be 34.7 million tonnes higher by 2020.

Currently the lobbying by the large power companies and the threat that the review will reduce or abolish the RET is paralysing solar and wind energy projects and putting thousands of jobs at risk. Last year the solar industry employed 17,000 Australians across 4,300 small and medium businesses.

The Clean Energy Council report indicates that up to 6,400 jobs in Victoria alone would be at risk if the current target of 20% was cut, and that 17 Victorian wind farm projects that have received state government approval would be unlikely to go ahead. This includes three major projects that between them would create 3070 jobs in Victoria, 240 of them permanent. Because of these threats to the renewable energy industry the country's two biggest companies in the sector - Infigen Energy and Pacific Hydro - now invest more money overseas than within Australia.

The Energy Supply Association, which represents the large fossil-fuel power generators, rejects the notion that building more expensive renewable-energy sources would make electricity cheaper. In the past, the demands of the existing power industry to protect their own interests have easily won out against the emerging renewable industry. For instance, a 2011 Victorian Auditor-General's Report noted that a state renewable energy scheme was weakened: primarily to alleviate the concerns of brown coal generators that the 10 per cent target would deliver too much renewable energy generation too quickly.

Will that happen all over again, this time at a national level? Some suggest it is possible. However, with a bigger renewables industry, more jobs at stake, greater public awareness and an active campaign to save the RET, hopefully this time will be different.

(Much of the information for this article came from Dylan McConnell, 'Is \$15 a year really too much to pay for renewable energy?', "The Conversation", 11/2/14)

John Lloyd

Bioenergy Opportunities for Australia

For several years now, I have been banging on about the opportunities for using bioenergy in the Benalla area. On the 30th April, I attended a 'Regional Bioenergy Project Forum' at Beaufort in Central Victoria, where I had the opportunity to learn about a bioenergy project that has recently been implemented.

The Pyrenees Shire, through their Bioenergy Project Manager, has been instrumental in installing a biomass boiler at their local Hospital, which has replaced the hospital's dependence on LP gas, giving an annual savings of \$55,000 on LP gas and an overall saving of \$35,000 on heating costs, while cutting their greenhouse gas emissions by 140 tonnes per year.

The system consists of a 110kW Hargassner boiler, hot water storage tanks and a fuel storage area, that have all been designed to fit within a 40 foot shipping container, which is located on the grounds of the hospital. The system is fuelled by a wood chip waste stream from the local sawmill. The biomass boiler has been connected to the existing hospital hydronic and hot water system, while the existing LP gas boiler has been retained as a backup. The system is fully automatic and has minimal maintenance requirement with a one day service taking place twice/annum. It is overseen by a staff member on a daily basis to ensure it is functioning correctly.



At a cost of approximately \$400,000, the estimated payback period is 8-10 years. The expected life of the system is 25 years. With gas prices currently at \$5/GJ and predicted to go as high as \$18/GJ in the future, the payback period will be even shorter.



As with all new technology, the path to the end result has taken a lot of time and has been full of learnings. One of the difficulties has been that for projects of this size, there are few system suppliers / installers in Australia. Good advice has also been hard to find. The result of this has been that this project has been a joint effort between several companies with the boiler system being installed by a New Zealand company (where bioenergy is a well-developed technology), while the modification and installation of the container has been carried out by a Victorian company.

The spin offs of this project have been immediate. At nearby Horsham, plans are afoot to install a biomass boiler at their heated pool complex, while the sawmill at Beaufort that supplies the wood chip to the hospital, is now looking to replace the briquette fired boiler they use for their drying kiln with a biomass boiler.

At Horsham, the fuel for their system will come through diverting 480 tonnes of timber waste from landfill. Although this system will be designed to use both timber and green waste, green waste can be problematic as often it will also include lawn clippings, gravel, plastics and other materials difficult to use. Some education may be required to obtain a better quality fuel source. It is anticipated that this installation will reduce their heating bill by \$25,000 per annum, savings obtained by reduced consumption of natural gas.

Benalla is well placed to take advantage of the savings that can be obtained by the use of biomass. The addition of a biomass boiler at our own heated pool can result in reduced operational costs. The precinct covering BPACC, TAFE, Benalla Health and Coinda would seem an ideal opportunity for a large heat producing biomass system, as the total demand for heating by these various facilities would be enormous. Their close proximity to each other means a large biomass boiler could be installed while minimising infrastructure such as pipe connections. Hot water could be connected to those facilities using this form of heating, and allow them to retain their existing systems as a backup.

For some, the thought of turning trees into woodchip and burning them would not appear to be either environmentally friendly or sustainable. My argument here is that there are many sources of existing waste wood that can be used. Native forestry operations that are harvested to produce sawlog leave behind wood that could be turned into either firewood or woodchip for biofuel. If not utilised, this residue is burnt on site in the process of preparing the site for regeneration. To me, this is a waste of energy that could be utilised. There are also waste wood sources such as sawmill residue and timber waste going into landfill.

A more straight forward example would be to use plantation grown timber, where if the starting point is a bare paddock, the trees are planted and remove carbon from the atmosphere as they grow. At harvest, and if the plantation trees are used for bioenergy, the carbon is then released back into the atmosphere as the wood is burnt, however in the process, energy is captured and used. The plantation can then be regrown. The carbon balance is close to zero and energy has been created.

I believe the use of trees for energy should be up among the use of solar and wind for energy. It can be used in a sustainable manner and growing trees for energy has the advantage of providing environmental values such as salinity and erosion control in the process of creating energy.

Bruce Sonogan

Benalla Food Co-op Report

It is hard to believe that the Benalla Food Co-op has been operating for exactly three years. During this period of time, membership has steadily increased and we currently have 63 members and whilst some previous members have chosen not to rejoin, those that continue with membership have a strong commitment towards more sustainable food purchases. We now have 76 products in stock. A number of products such as honey, walnuts and olive oil are sourced from local suppliers and we are keen to obtain more of these products as long as they fit within our Food Class Registration with Benalla Rural City.

It is interesting to note why people have chosen to become members of the food co-op, especially given the convenience of shopping at the large supermarkets. Late last year I asked members to give their reasons for joining the food co-op and the responses were:

'less food packaging, a reduction in food miles, superior quality of product, cheaper price in comparison to supermarket products, knowing where the product comes from, ability to see the product, to source organic products, access to products not found locally, an independent group running it, reduction in garbage, a friendly atmosphere, shopping where you can get to know people and enjoy the company of like minded people, and the ability to communicate with the suppliers.'

So you can see there are many good reasons for joining the food co-op.

Certified 'Fair Trade' products from Tradewinds

Other products we now stock are certified Fairtrade tea and coffee. The following information is taken from the Tradewinds website www.tradewinds.org.au

Fairtrade certification provides external checks that growers and producers are receiving a fair deal by:

- Setting a fairer price (the Fair Trade Price) for their produce
- Stipulating an additional payment (the Fair Trade Premium) to be invested in social, economic and environmental development in the grower communities. (e.g educational and medical facilities)
- Protecting producers from world market price fluctuations
- Prohibiting the use of forced or abusive child labour

Value Added products and Fair Trade

Value Added products are those that are fully processed and packed in their country of origin. Tradewinds believes that value added products make Fair Trade even fairer by:

- Creating more jobs
- Increasing incomes and skills
- Promoting development and secondary industries

Tradewinds supports Fair Trade and Value Adding in Sri Lanka, East Timor and the Pacific. All Tradewinds Sri Lankan teas are Value Added and many are Certified Fairtrade. In East Timor, Tradewinds have helped establish their first export coffee roasting facility, and are the sole Australian buyer of fully roasted and packaged coffee exported from East Timor. The PNG and Colombian coffees are fully Value Added.

Tradewinds have long term relationships with the producer partners and the projects they support. Products are carefully chosen and fairly traded and return the maximum benefits to producers and their communities.

Organic products

Many of the Tradewinds teas and coffees are also Certified Organic. Most are grown without the use of chemical fertilisers, herbicides or pesticides. Coffee growers use their traditional farming practices and grow small numbers of coffee bushes in their home gardens. Where this process has been recognised by a certifying body, it is indicated on the packaging.



The fairtrade logo.

If you would like more information on these products visit the website or contact Christine.

Committee

Late last year we had a general meeting for the food co-op members whereby an official committee was elected – they are Christine Holmes, Tanya Walker, Kathy Murphy, Lynne Seaman and new committee members Sonia Bourke and Judy Schwarzman.

Although Peter Holmes (treasurer of BSGF) is not a committee member, I would like to acknowledge his invaluable contribution with keeping our financial records and computer data base.

Christine Holmes
Benalla Food Co-op Coordinator



Swanpool Environmental Film Festival 2014

The first Swanpool Environmental Film Festival, held in 2013, drew considerable praise, prompting the organisers (including BSGF representatives) to hold a similar event this year.

The 2014 Swanpool Environmental Film Festival will be held on

**Saturday 14th June from 1 pm to 10 pm
Swanpool Cinema**

It will follow the same format - three sessions with three speakers and films to match their topics.

As well as delivering the opening address, 'Climate Variability or Climate Change?', Prof Kate Auty, former Victorian Commissioner for the Environment, will also be the MC for the event. The film 'Connected' will be shown in the first session.

Following afternoon tea Dr Mark Diesendorf from the University of NSW will address the question, 'A Sustainable Energy Future for Australia?' and the feature film 'The Future of Energy' will be screened.

The evening session will have a sustainable forestry theme. Prof. Rod Keenan from the University of Melbourne will provide answers to, 'What's happening with Global Forests?' The film for this session is 'Amazonia Eterna'.

Enjoy a fabulous selection of films, food and company on one great ticket, only \$20 (plus booking fee).

Tickets are available by pre-sale only and are available via Ticketbooth. Just go to the Ticketbooth website and search for Swanpool Environmental Film Festival. Or phone 1300 762 344 on your mobile.

Some tickets will also be available at the Swanpool Cinema ticket booth on screening weekends.

A full house is expected so please book early to avoid missing out.

For further details please contact Melanie Addinsall on 5761 1560 or 0439 040 955 or email landcare1@iinet.net.au

Some Positive News

While all the news at federal level about climate change and renewable energy is doom and gloom, we have some positive news at the local level. Benalla Sustainable Future Group has started discussions with Benalla Rural City about holding a Sustainable Housing Forum in September.

The focus of the forum will be on three groups: local tradespeople and larger builders, people wanting to build new homes and home owners who would like to retrofit existing houses to make them more energy efficient and reduce energy bills.

Tentative plans include having a special session for local tradesman on a Friday afternoon/early evening. This will be followed by a full day on the Saturday. The morning session will be a general session looking at the advantages of energy efficient and sustainable housing including the discussion of costs. In the afternoon there will be two streams: one focussing on building new houses and the other will focus on retrofitting existing homes. Our plans also include having product displays.

This is an exciting project and you will be kept informed of the details of this forum. As we get closer to the date we will need volunteers to help with a number of tasks to ensure that this forum is a success.

John Lloyd

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