



Newsletter

Transition The Grove

...transitioning to thriving resilience
for Ferny Grove, Upper Kedron, Woolshed Grove,
and the mountain catchments of Cedar Creek and Kedron Brook

#6 – February 2010

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Innovation to Zero Emissions

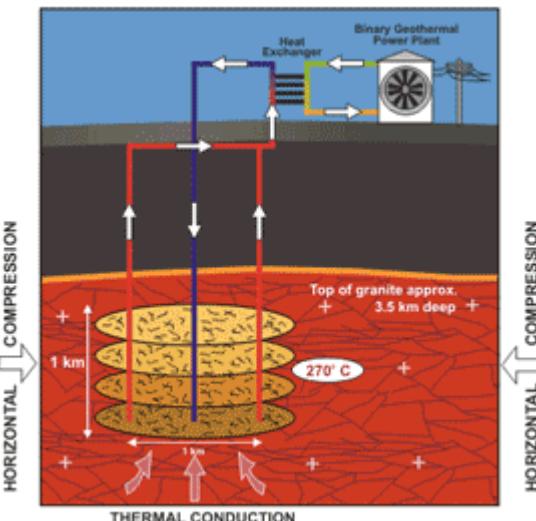
February has been a big month for exciting, high profile, energy innovation announcements.

Firstly, Bill Gates gave a TED Talk about the Terra Power Traveling Wave nuclear reactor, which can run on depleted uranium. This inexpensive but energy-rich fuel source could provide a global electricity supply that is, for all practical purposes, inexhaustible, emits no greenhouse gases, and can simultaneously reduce the huge amounts of depleted uranium waste fuel that already exists in stockpiles around the world.

Then there was the announcement of the Bloom Energy Server based on newly developed Solid Oxide Fuel Cell technology. According to their press release Bloom's Energy Server provides a cleaner, more reliable, and more affordable alternative to both today's electric grid, as well as 'traditional renewable' energy sources. The Bloom Energy Server claims distinction in four primary ways: it uses lower cost materials, provides unmatched efficiency in converting fuel to electricity, has the ability to run on a wide range of renewable or traditional fuels, and is more easily deployed and maintained. Unlike traditional renewable energy technologies, like solar and

wind, which are intermittent, Bloom's technology can provide renewable power 24/7.

In another approach, Enhanced Geothermal Systems offers a method of extracting energy from buried hot granite by circulating waters through an engineered, artificial reservoir or underground heat exchanger. These hot granites represent a massive source of renewable energy, free from CO₂ emissions. Enhanced geothermal power depends on the hot fractured granite lying under an insulating blanket of sedimentary rocks at least 3km in thickness. Australia is uniquely well endowed with suitable sites.



If you take the press releases for these ventures literally you could reasonably assume that, between them, they are the answer to the problems of Peak Oil, CO₂ emissions, and climate change. So, why not let the innovators solve these problems while we get on with our lives?

If you dig a bit deeper you soon discover that each of these examples are still a long way from delivering what they promise. In fact the press releases are more targeted at finding mega millions

of dollars in speculative investment and government funding, than about announcing available energy solutions.

For example, imagine the clever geo-engineering needed for enhanced geothermal power to develop the underground heat exchanger around 4km below the surface in temperatures of 270 degrees C. There is still much work to be done. Developer, Geodynamics Limited, is focused on delivering geothermal power from a 25 MW plant by December 2013 and is targeting production of more than 500 MW by 2018. Eventually output will reach 10,000 MW – the equivalent of 10 to 15 coal-fired power stations – giving Enhanced Geothermal a justifiable claim as a great Australian resource to rank with the Snowy Mountains Scheme. Eventually...

While Bloom Energy Server is actually in operation it does not, as it claims, deliver renewable energy. It needs fuel to run, most likely natural gas or another source of methane (such as landfill gas or biogas from anaerobic digesters) or, in the future, hydrogen. So the solid oxide fuel cell is just one component in a much more complex process that depends on alternative fuel developments. It also appears that the first generation of this technology is costly, and depends on 'green' subsidies to provide energy at a price that competes with conventional sources. CO2 emissions would probably be marginally better than if the equivalent fuel (natural gas, landfill gas, bio gas or hydrogen) was used in conventional power stations.

The travelling wave nuclear reactor is not much more than a twinkle in Bill Gates' eye. It is a theoretical concept that has now progressed to the stage of advanced computer modelling to develop the design. According to John Gilleland, CEO of Terra Power: "*If things go well we could have our first power-producing system in the 2020 time frame. But that is making a lot of assumptions*".

Bill Gates' justification for his support of Terra Power has credibility. He sees that climate change will have the greatest impact on the world's poorest people. Helping solve this problem is therefore consistent with the Bill and Melinda Gates Foundation's goal to provide all people the chance to have healthy, productive lives. He certainly doesn't need the money and doesn't seem motivated by mindless greed.

Perhaps the most important and direct message from these announcements was Bill Gates' unequivocal assertion that the world urgently needs miracles of innovation to reduce our rapidly increasing CO2 emissions to ZERO. He sees this as demanding the very best technological innovations in clean coal, nuclear, wind, solar-photo voltaic and solar-thermal. This supports the widely held view that this is the decade (2010 to 2020) when transition to zero emissions must happen. It seems unlikely that large-scale, high-tech, innovations will be ready in time to make the difference.

Gone are the days when innovation meant a farmer improving his equipment with some imagination, fencing wire and some simple tools; when creative and enterprising individuals could follow their instincts to invent new technologies like the light-bulb, the steam engine, the printing press, or the aeroplane. Leading edge technological innovation now needs big capital investment, expensive equipment, highly qualified expert teams, and years of development. Beavering away all night in the home workshop just won't cut it!

But we can do something! Some of the greatest changes in history happened almost independently of technology. The impetus for these changes was innovation in ideas, not technology. Slavery and apartheid were abolished, India achieved independence, the Berlin Wall came down. Innovation in ideas begins when individuals are correctly informed, develop ideas, and take action themselves, or within their family, neighbourhood, or wider community.

The Transition Town movement is proving a very fertile environment in which ordinary citizens can cooperate to develop and implement ideas that help reduce their dependence on oil and coal. Contrary to common sense, our crazy, consumer, casino economy has become defined as main-stream by a powerful media machine. It can be challenging to chart a different course and risk being thought 'weird'. The Transition Network helps individuals, families and communities to understand the realities of the situation, choose the actions that they wish to undertake, and provide ongoing support and encouragement along the way. The results are wide ranging and include community projects like community gardens, solar energy projects, transport solutions like car-pooling, local recreation and entertainment, and education.

Transition Towns Training

Transition The Grove took another step forward in February when we undertook the official Transition Towns training workshop over the long weekend from Friday 5 to Sunday 7 February. This event was held in a small conference centre at Eumundi. Given the amount of rain that fell that weekend, and the fact that most of the attendees were camping on-site, you might have expected it to be a washout. Quite the contrary, the wet weather combined with agreeable company, good food, and fruitful discussion to create a richly enjoyable experience. Admittedly we had to pack up our tent in the rain and it took the best part of the following week to dry it out.



So, you might ask, why do we need training? Can't we just 'do it'? Well, yes we can, and more and more people are, as the effects of changing climate and diminishing oil supplies intrude increasingly on our awareness. But it doesn't take long to discover that you can't do much on your own. Cooperation is vital to developing local community resilience! This means cooperation on many levels: local and state government, local community groups, local businesses and, most of all, cooperation with each other. All that cooperation calls for a degree of mutual confidence and trust that can take a long time to develop.

Key to the successful growth of the Transition Towns movement is its strong culture of respectful community cooperation illustrated by many examples of successful transition initiatives around

the world. Transition Training is the means by which this culture is passed on so that emerging transition initiatives benefit from, and preserve, the good reputation of the Transition Towns movement. It provides a foundation for the confidence and trust that is needed to build a resilient community.



One of the requirements for being recognised as an 'official' Transition Initiative is that two members

must complete the training course. Having taken this step we are now able to use the Transition Network logo.

An outline of the course looks like this:

- History of and introduction to the international Transition Town model
- The language of Transition
- The Transition Handbook and how best to use it
- Transition Towns in Australia
- The principles on which Transition Towns are built
- Finding your running mates
- First steps
- How to be not just 'another bloody group'
- Understanding the uniqueness of your community
- Case studies of other initiatives (how they got started, what they are doing, what's working)
- Understanding group dynamics
- Group facilitation skills
- Strategies for raising awareness in your community
- SWOT analysis of your community
- Planning Pathways to Resilience
- Defining domains and levels of action
- Working with local government
- Planning projects and making them happen
- Energy Descent Action Planning
- Your next steps and your personal pathway to resilience
- Whatever else you need to get started...

Brisbane Transition Hub Planning



On Sunday 14 February the Brisbane Transition Hub kicked off the year with a planning meeting to commit effective and immediate action we can take to build local community resilience in the face of

of changing climate and diminishing oil supplies. The meeting included representatives from a good number of Transition Initiatives around Brisbane, and from other related groups with similar objectives.

At each of these gatherings it is always encouraging to see new faces, and hear about new initiatives springing up in different suburbs. At the rate these new initiatives are emerging, it is important to meet together regularly and share ideas and experiences so that new groups have a running start.

The effectiveness of meetings like this is much increased if they are properly facilitated so that the discussion generates ideas that are turned into commitments to action. Our main focus continues to be raising awareness in our local communities through engagement with individuals and established community groups.

Friends of South East Queensland

On Sunday 28 February we attended a combined meeting with Friends of South East Queensland and the Australian Society for Peak Oil (QLD Branch), at the Eco-centre at Griffith University. The all-day brainstorming session discussed an alternative South-East Queensland Regional Plan that takes into account Peak Oil and the values identified in the Earth Charter. Several themes which emerged were the issue of democracy with consultation; and the disjunction between the Government's awareness of Peak Oil and climate change research, and their actual planning processes. Someone raised a point that is very pertinent for Transition movements. Australian Tax law encourages many Australians treat their homes as a capital-gains-tax-free way of increasing wealth investment; buying large homes for investment then up-selling, moving suburbs in the process. This conflicts with the approach to property that sees it as a long-term secure, stable place to live and to become part of the community. These two approaches struggle to co-exist.

Queensland Government Population Forums

The Queensland Government is holding a series of Population Forums. The February event was held before a large audience at the Griffith University Conservatorium with a panel including Premier Anna Bligh; Brisbane Mayor Campbell Newman; Sunshine Coast Mayor, Bob Abbott; and Professor Brendan Gleeson from Griffith University. After the panel presentations, there was rich involvement

from the audience.

Upper Kedron is identified as a key growth area in the SE QLD Regional Plan, although we have so far been unable to get hold of figures for how many additional dwellings it is proposed to put in the region.

It is certainly true to say that population is becoming a very hot topic in SE QLD!

A summary report follows:

Professor Brendon Gleeson:

- ***Peak Oil, Climate Change: our 1st and last line of defence is the suburbs.***
- ***Population carrying capacity is not a straight-forward thing: We need to drive down the ecological footprint.***
- ***We've been embarrassed about our urban reality, sought to deride a suburban lifestyle***
- ***Vast majority live in suburbia & this disenfranchises them, unjust, self-defeating***
- ***Commonwealth scores a C-***
- ***Have to deal with our unwillingness to fully embrace the sustainability imperative***

Councillor Campbell Newman:

- ***Federal Government is "shovelling them in through the door" We need help to deal with it***
- ***We need a National Population Policy.***
- ***Commonwealth Government has no involvement. They need to be at the table.***
- ***I'd like to see population throttled back***
- ***Not confident we can provide the infrastructure.***
- ***Some projections need challenging (migrant intake, intergenerational). The Federal Government has to make the case.***
- ***Let's build up Maryborough, Rockhampton, Bundaberg, Logan, Ipswich, Scenic Rim, Lockyer Valley, Somerset.***
- ***The Regional Plan isn't broken, but there are a few things to fix.***

Councillor Bob Abbott, Sunshine Coast Mayor

- ***This growth is costing us dearly***
- ***People are complaining***
- ***We need to be proud of what we deliver for***

the long term

- *We need a paradigm shift*
- ***We should base population policy of this country on the science of carrying capacity***
- ***Andrew McNamara, a brave politician, asked: "Why do politicians encourage population growth when the environment can't stand it, the economy doesn't need it, and the people don't want it?"***
- ***The time for honest, open, concise debate in our community on population is now***
- ***Only certainty is people's lifestyles are being attacked (significant loss of biodiversity, pollution in Moreton Bay, waiting lists in hospitals, price hikes in water, power and transport, traffic jams)***

Guy Gibson from Lend Lease, developer:

- *Completely unrealistic heroic assumptions about shift in consumer values*
- *People consistently prefer detached homes over apartments*
- *Australian builders are the most efficient in the Western world at building houses*
- *Apartments are 2.5 to 5 times more expensive to build*
- *Approval for development takes 5, 8, 10 years to get*

Premier Anna Bligh:

- ***Fracturing of community consensus***
- ***Neighbourhoods beginning to revolt***
- ***Escalating rate in single person dwellings now 24%***
- *We're putting 3 new train sets on the lines every month*
- *QLD's population growth is 2.6%, 115,000 extra people/year*
- ***48% overseas migration, 35% our breeding, 16% interstate migration***
- *What is happening is changing very quickly*
- *More than 2/3 settle in SE QLD*
- *Developers want more land*
- *We were unplanned for most of our history, and bad mistakes made (narrowed streets, pulled up rail & tram)*
- *Many people are calling to slow pace & calling for population caps*
- *(On a world & national comparison) Brisbane is a low population density city in a low population density region*

Someone:

- *SE QLD now unaffordable for NSW & Victorians to migrate here*

Jane O'Sullivan of Sustainable Population Australia

- *The argument for the growth we are now having is based on the need to grow. This is circular. We need to stabilize.*
- *The talk about establishing an ideal population first is a distraction from the real issue*
- *The real argument is around growth itself, and the dishonesty of the justifications for it.*
- *The costs of growth are much greater than the costs of aging*
- *The costs of growth are not being acknowledged against the purported benefits*
- *We need a national population strategy*
- *The reason that I think talk about carrying capacity is a distraction is that Gleason is right - there is no figure that you could build consensus on, because it depends on so many value judgments. It's also evident that we're well over carrying capacity based on our current behaviour, so it becomes a bit academic since we're not planning to cull people. Even if we're arguably under carrying capacity by some definitions, it's easy to demonstrate that being well under carrying capacity is a good thing, so that's no reason to grow.*

John Brent, Mayor of the Scenic Rim

- ***We must retain water for food production in SE QLD***

Ed Smith, Coffee Industry

- ***Oil is running out, and we are building trade deficits importing oil***

Anna Reynolds, QLD Newspapers

- *QLD's fertility rate stable*
- ***International migration intake rising***
- *Interstate migration intake falling*

Kedron Brook Catchment Branch

Transition The Grove has committed to working in the area defined as Ferny Grove, Upper Kedron and the mountain catchments of Kedron Brook and Cedar Creek. This has the advantage of being a naturally defined bio-region on which we can focus our energy. In looking at community resilience around issues like food, water, health and energy it makes sense to extend our view beyond our suburban streets and buildings, to include the natural environment.

Kedron Brook and its tributary Cedar Creek flow from the hills surrounding this area which form the upper reaches of the catchment of Kedron Brook which flows through many other suburbs before reaching the sea at Nudgee Beach. Along its length there are many active bush-care and environmental groups, several of them in The Grove. These groups are connected through the Kedron Brook Catchment Network, an informal network of individuals and organisations working together to maintain and improve Kedron Brook catchment's environment.

The Kedron Brook Catchment Network is a branch of the Wildlife Preservation Society of Queensland. It holds regular meetings, publishes a newsletter *The Kedron Brook Babbler*, and maintains a web-site <http://www.kedronbrook.org.au> where you can find out more information.

On Tuesday 16 February we attended a KBCN meeting, which included an interesting talk about frogs in the catchment.

My First Frogging Expedition (19 February)

It's a bit of a standing joke in our family. When we first installed a fish pond in our back yard several years ago, it was quickly populated by frogs which the Queensland Frog Society helped me identify as the common Eastern Sedge (pictured) and Striped Marsh (now known as Sedgy and Marshy).

I have spotted our Striped Marsh frog only once in all that time, but it only needs a little rain to have him calling for a mate. On the other hand, the Eastern Sedge frogs have been quite visible, very audible and, to me, fascinating. Early on these little fellows bred prolifically and I would often find dozens of tiny jewel-like babies, in all colours from green to gold to brown, climbing up the reeds in the pond. I would sit and watch them for hours.



When conditions were favourable there would also be several adults chirruping away. Just for fun I tried emulating their calls, but never very convincingly. On some nights, when all was quiet in the pond I would try a tentative call and was amazed that I seemed to get a response. I assumed that I was just imagining things and was quite happy to perpetuate the joke about 'John talks to frogs'.



Imagine my surprise then, on my first expertly guided 'frogging expedition', when Adrian our leader let out what our wildlife book calls a *single resonant harsh "wark"* and received an immediate reply from deep in the dark damp bushes. Eventually our group (of about 20) managed to round up the Great Barred-frog and Adrian showed us how to catch and hold him without doing harm. So, the first thing I learned was that we really can have conversations with frogs! I also learned that the striped marsh frog in our backyard is not the only species that is almost impossible to see, and that the best way to identify frogs in different locations is to know their calls. Now that I have heard many of the local frogs, and with a bit of practice, I should be able to recognise and document their locations in our local area. An addition to the familiar Eastern Sedge (at

Wahminda Waterhole) and Striped Marsh (Grinstead Park), my catalogue of recognisable frog calls has been extended to include the Tusked Frog (Grinstead Park), Copper-backed Broodfrog (at Lomandra picnic area), Great Barred-frog (at Maureen Lawrence Park) and the Broad-palmed Rocketfrog (at Canvey Road).



Which might raise the question about why anyone would bother to record frog sightings (or hearings) when it involves poking around in swamps and creeks, at night, preferably in the rain. Well, one reason is that you get to engage in an interesting activity, with very nice, friendly, real human beings (not just frogs). Another reason, for me, comes down to environmental awareness. For many people this means actions like observing rules about using the recycling bin, avoiding releasing toxic chemicals into creeks and waterways, or buying recycled paper. However, another aspect of environmental awareness involves actually getting to know the other creatures like birds, insects, reptiles and frogs whose environment we share.

The following is quoted from the Queensland Museum web-site.

Frogs are known to be indicators of ecosystem health (or bio-indicators), because as skin-breathers they are affected by environmental poisons such as pesticides and herbicides. Evidence from captive breeding and keeping, field monitoring and tissue testing of frogs has identified some other causes for frog decline.

In 1993, two leading frog researchers Glen Ingram of the Queensland Museum and Keith McDonald documented the decline of some species of frogs from upland Queensland rainforests. Seven species of frogs had disappeared and another four had

seriously declined since 1979. One species, the Southern Platypus Frog or 'gastric brooding frog', was considered unique because its tadpoles developed in the mother's stomach.

Similar declines in frogs have been reported in North and South America, Europe, and South Africa; areas with active biological research communities. In south-east Asia and New Guinea where there has been no monitoring, no one can say if their frog populations are secure.

Chytrid (kit-rid) fungus

Chytrid fungus has probably contributed to the mass deaths observed by researchers. This fungus feeds on keratin, a tough protein found in the skin on the hands and feet of adult frogs and in tadpole mouthparts. Frogs affected by chytrid fungus develop thickened and peeling skin, become lethargic and lose hind leg movement. They die a few days to weeks after these symptoms first appear for reasons not yet known. Infected tadpoles die shortly after metamorphosis. So far, scientists have found affected frogs are mainly large-bodied and live in mountain streams, but much more research needs to be done on this disease.

Habitat destruction and degradation

Human habitation of coastal areas of Queensland has altered or destroyed many frog habitats. Changes include the clearing of wetlands for real estate, the damming of rivers, cattle damage and introduced fish, which are predators of tadpoles. For example, Mosquitofish or Gambusia caused the extinctions of bell frogs in south-east Australia.

Climate change

Scientists predict global warming will cause unprecedented worldwide changes to rainfall and temperature. Rapid climate change will be catastrophic for frogs, because they need water for tadpole development, and this makes migration difficult.

In addition to the residential suburbs of Ferny Grove and Upper Kedron, Transition The Grove is committed to the future sustainability of the catchments of Kedron Brook and its major tributary Cedar Creek. These catchments are the source and headwaters of Kedron Brook which flows through many of Brisbane's northern suburbs before reaching the sea at Nudgee Beach.

Care of this area is shared by several organisations. Part of it falls within Brisbane Forest Park administered by Brisbane City Council. The Kedron Brook Catchment Branch of the Wildlife Preservation Society monitors environmental health all along the catchment, and organises wildlife surveys. Various bushcare groups are actively working to restore degraded bushland and help preserve biodiversity. We are aware of Ferny Grove Bush-care, Cedar Creek Bush Care and Wahminda Grove Bush Care. If you know of others, please let us know.

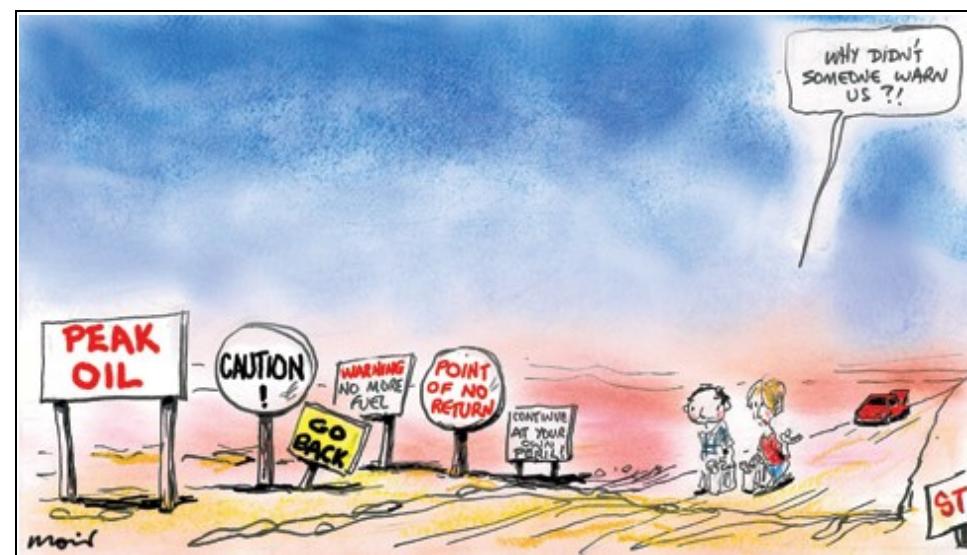
Given our concerns about the effects of climate change it is important that we contribute to the effort to help monitor and report on the environmental health of our locality and help to preserve it for future generations.

Will I be back for future frog surveys? You bet! As a real life drama, it sure beats watching TV, and satisfies more at the level of sharing the glowing embers of a campfire with good company.

Super Tuesday Bicycle Count

Have you noticed? More and more people are cycling (including me)! It's catching on.

Bike shops are prospering all over the place. Brisbane City Council is developing cycling centres (King George Square and RWH so far) to encourage commuters to leave their cars at home. Several new bridges provide river crossings for bicycles, and NOT cars.



That's it for February.

Please check out our web-site at http://www.tennock.com/j_data/TTFG/

For more information please contact us on

Tel: (07) 3851 1016 or Email: johntennock@optusnet.com.au

There are several obvious motivations for cycling including health and fitness, avoiding and reducing traffic congestion, eliminating the effects of rising fuel costs, and reducing greenhouse gas emissions, all things which bicycles do extremely well. Cycling is just an extremely efficient form of transport!

It is also well recognised that cycling on busy roads is a very dangerous activity. Accidents are all too frequent and cyclists are extremely vulnerable.

Unlike cars, where registration provides government planners with a lot of valuable planning information, very little information is collected about bicycle use. As we make the transition to a low carbon future, it will become increasingly important for planners to have reliable data.

Super Tuesday, Australia's biggest visual bike count, aims to establish a reliable annual benchmark for bicycle commuting to allow those providing facilities for bike riding to base their judgments on accurate, relevant and up to date information. Super Tuesday Bicycle Counts have been held annually since 2007 and this year it is intended to make the count publicly available on the Bicycle Victoria web-site.

The count is undertaken, nation-wide, by volunteers. Unfortunately the timing this year did not allow for including information about volunteering in the January issue of our newsletter and this issue will not be out in time to do more than report on the event.

Contributions: If you would like to submit relevant articles for this newsletter, please send them as an email attachment in either an MS Word (.doc) or Wordpad (.rtf) format. Please do not send as text in the body of an email. Please include your full name and contact details.