



The Bullroarer - Friday 21 March 2008

Posted by [Big Gav](#) on March 21, 2008 - 7:56am in [The Oil Drum: Australia/New Zealand](#)

Topic: [Miscellaneous](#)

Beyond Zero Emissions - [Tim Flannery on Terra Preta and the Renewable Age](#) (via [Energy Bulletin](#))

Look I think we should start with the knowledge that there is 200 gigatonnes of excess carbon floating around in our atmosphere. Now that is a very large amount of carbon. I won't explain what a gigatonne is but it's a lot, and that started to accumulate at the beginning of the Industrial Revolution as we burnt the coal and put the carbon into the atmosphere.

Now, it has become very clear that we have to find a way of drawing down that carbon stock in the atmosphere. So we've got to not only reduce our emissions, so get rid of the burning of coal and so on and so forth, we've have to draw down the existing gas and people have been searching for ways of doing this. Some of your listeners may have heard about proposals to re-grow tropical forests for example or forestry's "I'll plant a tree and off set your emissions" and this sort of thing.

Well these Terra Preta solutions are in some ways or certainly for some purposes are a better solution, a superior solution to anything that's been brought up so far. What the process basically involves is taking any biological material, that could be crop waste or corn stalks or whatever, forestry waste, even human sewage, and partially burning it in the absence of oxygen so that you get a synthetic gas at one end of the process that you can then burn which is hydrogen rich, not so much carbon in it, but hydrogen rich, you can burn that for transport purposes or to generate electricity and at the other end of the process you get charcoal. And the great thing about charcoal is that it is a very stable form of carbon.

Cleantech.com - [New Zealand report touts biomass for energy needs](#)

The government study said purpose-grown energy forests could meet all of the country's future heat and transport fuel needs. Biomass could be the answer to a bulk of New Zealand's future energy needs, according to a report from a government research group. Scion, a crown research institute, said purpose-grown energy forests, if planted today, could meet all of the country's future transport fuel and heat energy needs, without threatening the country's important agricultural industry. The report states that even the most conservative estimates show New Zealand has at least 830,000 hectares of steep, erodable, low producing grass and shrub lands that could be cost effectively used for forestry.

AUSTRALIA'S biggest gas development is being planned for deep in the Indian Ocean 425km north of Broome with the aim of delivering major export revenue well in to the second half of the century. Perth-based Woodside Petroleum has for the first time released broad plans for the proposed Browse Basin investment, for which it already has secured export orders worth up to \$90 billion.

A number of other Browse LNG plans are being developed by a raft of domestic and global gas companies. Woodside and its partners, Shell, BHP Billiton, Chevron and BP, are planning to develop the Torosa, Brecknock and Calliance gas fields about 290km off the Kimberley coast. Estimated costs for the total development have not been released but industry analysts believe it will involve investment of \$US25-30 billion. The project partners have yet to determine whether the gas will be processed onshore at a WA government-sponsored LNG hub expected to be close to Broome, or near the existing North West Shelf gas processing facilities about 1200km to the south.

SMH (ASPO Australia's Garry Glazebrook) - [Dig deep to reach the transport vision](#)

THE Premier's announcement this week of a \$12.5 billion metro line from Rouse Hill to the city is truly visionary. But is it a mirage?

The proposal sensibly confirms the earlier commitment to the north-west rail line by 2015, but adds a new connection between Epping and the CBD under Gladesville, Drummoyne, Rozelle, and Pyrmont, to be finished two years later. It promises a new metro-style operation and a new public transport operator that hopefully can bring Sydney's ailing rail system into this century. Additional metro lines to the south-eastern suburbs and between Parramatta and the CBD are proposed.

This is brave and exciting, and the Government and its planners should be congratulated on their vision. However, there are some technical and operational questions that need answering. Will the soon-to-be completed Epping-Chatswood line become a ghost line, when it is starved of feeder trains from the north-west? How can the overcrowding at Wynyard and Town Hall stations be relieved if the harbour rail link is deferred? Have the complex engineering challenges of crossing the harbour four times been properly thought through? Will the new metros be compatible with existing CityRail electrical systems, signalling, platform heights and loading gauges, and if not where will the 35 or more trains required for the new line be stabled? Will this project trigger compensation for the owners of the M2 motorway?

SMH - [City catches fast-tracked metro](#)

The NSW Government has promised to build a state-of-the-art underground metro to the city's north-west in just nine years, ushering in a long-awaited new era of commuter travel to Sydney. Yesterday the Premier, Morris Iemma, finally unveiled the \$12 billion North West Metro, with high-frequency trains to Rouse Hill via Drummoyne, Gladesville and Ryde in a strategy foreshadowed by the Herald in September and

revealed in detail in this paper last month.

The announcement means the Government's linchpin transport policy for the past three years - the \$8 billion Metropolitan Rail Expansion Plan - has been dumped. The second harbour crossing and city centre link promised under the plan, seen as crucial to the troubled CityRail network, will not be built. Instead, the Government's new team of transport planners has been forced by Treasury to turn the North West Rail Link into an independent metro-style line that can be, at least in part, privately financed.

SMH - [Dirty old Munmorah at risk in changing times](#)

FEW coal-fired power plants are more vulnerable in the energy revolution than Munmorah on the Central Coast. The state-owned Munmorah has a reputation as the oldest and dirtiest coal generator in NSW. It emits more than a tonne of greenhouse pollution for every megawatt hour of electricity it generates. In 2006 it emitted about 1.5 million tonnes of carbon dioxide, one of the main greenhouse gases, according to figures provided by Hugh Saddler, managing director of Energy Strategies. That meant Munmorah was responsible for about 1 per cent of the state's total carbon dioxide emissions.

Under the emissions trading scheme outlined by Ross Garnaut, coal-fired power stations such as Munmorah would find their costs rising as they were forced to buy permits to emit carbon. Professor Garnaut argued in his report yesterday that coal-fired power generators should not be compensated with free permits to emit when the Rudd Government brings in the emissions trading scheme from 2010. He said there was no evidence that free permits would stop electricity price rises being passed on to consumers and could give super-profits to the generators.

SMH - [Fast-track for seabed storage of emissions](#)

AN AMBITIOUS plan to allow millions of tonnes of carbon emissions from coal-fired power stations to be stored under Australia's seabeds will go to federal cabinet within weeks despite environmental objections.

The federal Energy Minister, Martin Ferguson, said yesterday the plan was vital to making Australia a leading player in clean coal technology. "Coal will continue to make a major contribution to Australia's energy needs well into the future and therefore we need to urgently reduce greenhouse gas emissions from coal-fired electricity generation," he told the Australian Energy Alliance conference in Sydney.

The plan will be pushed through Parliament this year so the Rudd Government can begin releasing acres of offshore sedimentary basins for companies to search for storage sites. The move would make Australia "one of the first countries in the world to establish a regulated carbon capture and storage regime", Mr Ferguson said. But he acknowledged that the question of who would accept legal liability for the long-term seabed storage had yet to be worked out.

SMH - [Carbon permits promise rivers of cash](#)

SELLING permits to businesses that wanted to emit greenhouse gases would raise large amounts of government revenue, the climate change review head, Ross Garnaut, said yesterday. "It's a big number," he told reporters, but he was reluctant to put a figure on it until Treasury modelling was completed later this year. The Climate Institute this week estimated that the money raised from permits could total as much as \$20 billion by 2020 - more than the current annual defence budget - but Professor Garnaut said only: "There are going to be very large amounts of money."

SMH - [Ross Garnaut, the green man](#)

This week Garnaut presented his vision for an emissions trading scheme which the Federal Government is relying on to significantly drive down Australia's high level of emissions without devastating the economy. He will hand his final report to the Government in the second half of the year.

It is an Australian version of the 2006 report done by Sir Nicholas Stern for the British Treasury which found the cost of not acting to avert dangerous climate change would be comparable to the combined effects of both world wars and the Great Depression. Stern concluded it was no longer possible to arrest climate change developments over the next 20 to 30 years and instead opted for a strategy to reduce the impact. Stabilising the atmosphere would require cuts in greenhouse gas emissions of about 80 per cent on current levels, a figure supported by Garnaut in an interim report he released last month.

The analysis so far and the papers Garnaut has already produced have "put an H-bomb under the debate", says one person familiar with the review process. "He's been a bit hot and cold. At the beginning he was a bit wobbly, and interested in China and too many issues that were at the margin. But he's smart and he's challenging and he is outside the box. He doesn't take any crap."

SMH - [Compo for green energy casualties](#)

THE price of electricity and petrol will rise for all Australians under the Rudd Government's plan to slash greenhouse gas emissions, and poorer households will be hardest hit, its chief economic adviser on climate change warned yesterday. In a blunt report which puts him in conflict with the NSW Government and the nation's power industry, Ross Garnaut argues that coal-fired power generators should not be compensated with free permits to emit greenhouse gases when the federal emissions trading scheme is introduced in two years.

Money raised by selling the permits should be used to compensate the poor instead, and help Australians adjust to the new carbon-constrained economy. This could include making payments to households, supporting declining communities around the coal-fired generators, investments in clean energy technology, and public transport.

The Age - [\\$33 million to help bush go solar](#)

The Victorian Government will spend \$33 million helping households in regional and rural Victoria switch to solar hot water. Eligible residents can claim a rebate of up to \$2500 to install a hot water unit. State Minister for Environment and Climate Change Gavin Jennings said the rebate was part of a plan to help households shift from gas or electric hot water systems to solar hot water.

The National (PNG) - [Geothermal power big winner for Lihir](#)

Energy Current - [Maari platform sails for New Zealand](#)

The Australian - [Oil Search to drop assets for PNG play](#)

The Australian - [Origin raises \\$1.5bn to fund growth](#)

Smart Electric News - [Excess Energy - what to do](#)

A main criticism of renewable energy is that it is pulsating and unpredictable. There is certainly some truth in this although not as much as it appears at first glance. For instance, as solar panels become common all over the country, places in the sun will balance places with cloud cover. The same applies to wind power. As fronts move from South to North along New Zealand, a pulse of wind generated electricity moves with it to be distributed by our power grid. Hydro is the ideal power source to instantly balance any shortfalls and New Zealand is rich in Hydro resources. On top of this any system which store excess energy in times of high generation, as mentioned above, and makes it available in times of low generation is of value.

Here in New Zealand in our present (2008) la Nina climate an interesting fact has come to light. Our wind generation is somewhat lower than average while our sun hours are greater. At present, solar electric is insignificant as a power source but as more solar comes on line, it appears that solar will help to balance wind. This would not necessarily be the case in all countries.

In the end, as our fossil energy runs out, we may even have to take a look at our tendency to be control freaks and accept that we can not always have energy exactly when we want it. Where I live we have now being living with solar water heating for half a year and while we almost always have hot water, three completely cloudy days leaves the tank cold. We find we are now much more aware of the weather and we never leave the hot water running while we do the dishes. Perhaps living with renewable energy will make us all a little more aware of our environment and our impact on it.



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