

## Up coming events:

Just before the **G20** in Brisbane: **Capricorn Conservation Council** is hosting a Climate Action: 06.30 pm Wednesday 12<sup>th</sup> November Environment Centre, Haigh Park, off Livermore Street, R'ton.

## Our World's Energy Crisis

The future global economy is likely to consume ever more energy, especially with the rising energy demand of developing countries such as China and India. At the same time, the tremendous risk of climate change associated with the use of fossil fuels makes supplying this energy increasingly difficult. For the first time in history we face an energy crisis not because we might run out of energy, but because we are using it in the wrong way.

Up to now the energy industry was judged by two metrics:

- its contribution to energy security and
- the **cost** of energy delivered to the consumer.

However, it's not just **Economic** Costs, so a third metric needs to be added:

- its success in reducing the emission of greenhouse gases, chiefly carbon dioxide, into the atmosphere.

However, the challenge of sharing the planet's resources is inherently linked to the huge imbalances in **consumption** patterns across the world. Currently, the wealthiest 20% of the world's population consume 80% of global resources and are therefore responsible for the vast majority of **climate change and environmental destruction**. Meanwhile, the poorest 20% of the population lack sufficient access to essentials such as food, clean water and energy, and account for just 1.3% of global resource consumption. **Why nations need to share the environmental crisis**

The poorest people are also the most likely to suffer from the harsh effects of climate change and resource depletion. A recent study has shown that coal pollution in India results in 80,000 to 115,000 premature deaths every year and this statistic is expected to rise to 1.5 million if we continue on our current path. **India coal plants emissions Greenpeace**



Coal is mired in deep social inequities. Travel to any major coal belt in India and the people living around a coal plant face regular power outages.

See <http://www.abc.net.au/environment/articles/2014>

This cruel irony is explained by the fact that the power generated is often for the cities, the energy guzzlers, while the negative residual impacts of coal are to be borne by those living next to it. The industry is often set up on the pretext of providing jobs, greater compensation for land and adequate rehabilitation and resettlement for displaced communities. None of these promises have ever been satisfied and the

coal belts of India stand testimony to that fact. **Adani and GVK** are two Indian companies that want to build the biggest coal mines in Australia. They would enable billions of tonnes of carbon pollution to be pumped into the atmosphere at a time when we need to urgently replace fossil fuels with renewable energy. The coal would be shipped out through the Great Barrier Reef, with millions of tonnes of seabed dredged from the World Heritage Area to make way for massive new coal export terminals. It's an environmental and climate disaster in the making and here's the kicker: **Indians don't even want the coal.**

We asked a polling company in India to see how people actually felt about importing Adani and GVK's Australian coal and burning it in India for electricity. 69% of people were opposed to the idea with Adani's home state of Gujarat showing some of the highest levels of opposition, at 87%.

Click image for more information



**Sustainable Central Queensland** an initiative of CCC welcomes contributions on energy efficiency; technological options and actions individuals and groups can take help CQ lead the transition to a sustainable future. Opinions may not necessarily represent the policy of Capricorn Conservation Council.

A **Global Economic Symposium** held in 2014 (Malaysia) has proffered three main solutions to the energy crises:

1. Reduce growing energy demand through improved energy efficiency and conservation.
2. We need to look at both the short-term and long-term. In the short-term we can push existing technologies to help reduce carbon emissions. Fortunately we already have many technologies at our disposal: from wind, wave, solar and biomass for heat and power, to liquid biofuels, biogas and electric motors for transport. In the long-term, evolutionary technologies need to be further developed and research into revolutionary ones pursued.
3. The so-called 'developed countries' along with large developing countries such as China, India, Russia and Brazil, should agree and adopt a common position on climate change, focused on reducing greenhouse gas emissions through an effective cross-border market and technology transfer mechanism.

Put simply, we cannot hope to avoid the dangerous consequences of climate change unless global emissions are halved from current levels by 2050. At current rates of population growth and with current technologies this will be impossible without a global agreement to limit and disperse the negative consequences. Developed countries must shoulder the initial burden with an agreement for immediate emissions cuts. They thought in return the largest developing countries must agree to cut their own emissions in the future, but only after having achieved some recognizable level of economic development. See [the energy crisis and climate change/proposals](#) **Equation**  $\text{Impact} = \text{Population} \times \text{Consumption} \times \text{Technology}$  See [Sustainable Scale](#)

**Note: This symposium regards** carbon capture and storage as a crucially important technology which allows for the continued use of fossil fuels in the future energy mix. Last Sunday Background Briefing considered Greg Hunt's plans to use clean technology to reduce emissions, see below.

### CLEAN COAL?

Environment Minister Greg Hunt constantly touts plans to clean up Australia's coal-fired power stations, pointing to CSIRO technology that could reduce their greenhouse gas emissions by 30 to 50 per cent. It is a key plank of the federal government's Direct Action strategy to combat climate change and its centrepiece \$2.5 billion Emissions Reduction Fund, which finally passed through the Senate at the end of October with the support of the Palmer United Party and key independents. However, the CSIRO technology in question—the **Direct Injection Carbon Engine, or DICE**—exists only as a prototype single-cylinder 16 kilowatt, 3.9 litre diesel engine in a lab in Newcastle.



The CSIRO itself cautions the technology is 'immature and unproven' and **at least five years away from operating at a commercial scale**. The Direct Injection Carbon Engine trial is designed to maximize the value and reduce emissions associated with the use of Australia's brown coal resource. CSIRO and its industry partners plan to trial the Direct Injection Carbon Engine (DICE) in Victoria's Latrobe Valley, the second largest and lowest cost brown coal resource in the world, with the aim of reducing emissions from brown coal-generated electricity by 50 per cent compared to current technology. **Has the CSIRO lost its way?**

Energy consultant Bruce Mountain says the direct **injection carbon engine** won't really reduce carbon emissions. 'Yes, it is lower emission than building an equivalent old brown coal station, but who's is going to build that? Surely if there's a calculation of the emission abatement it's against modern equivalent alternatives, and alternatives exist at lower cost with no emissions, or much lower emissions, so I don't know in what sense it would qualify as an emission reduction. Bruce Mountain says rolling out large new coal-fired diesel engines for power makes no sense. There is already a surplus of generating capacity and, based on his analysis of forecast cost figures given to the government, the technology is neither cheap nor clean. To listen to Background Briefing or download the transcript go to: [Background briefing/Mr. clean coal](#)



Hazelwood Power Station (Brown Coal)

Long-time local residents of **Mudgee NSW** (nw of Newcastle) have watched the huge coal mines spread through the district, and have been trying to piece together how all the mines got approved. The mining companies are the largest landowners between the village of Ulan which doesn't have any private owners left in it, all the way down to Bylong and the infamous Mount Penny exploration licence area where the same directors that are involved in winning this Moolarben exploration licence were so closely involved with Eddie Obeid and the Mount Penny exploration licence which went through ICAC. So from the local perspective we have seen the same set of people just working their way through the valley following the coal seam and making a fortune out of it, while the rest of us are putting up with noise, dust, loss of our neighbours, hundreds of coal trains. It's just changed the dynamic of the region. They are now multimillionaires if not billionaires and the rest of us are feeling quite done over. And the clean coal just never seems to eventuate.

Mudgee district landholder Bev Smiles says there is no clean coal, and all of the money that has been poured into various aspects of clean coal—geo-sequestration, this briquette proposal—there is a whole range of things that have been called clean coal, and nothing has come of it. It's certainly not cheap, so it's been a great waste of taxpayers' money, at the same time as people that have been shopping around have just made millions and millions of dollars out of selling dirty coal. Meanwhile Renewable Energy companies are moving overseas, see below!

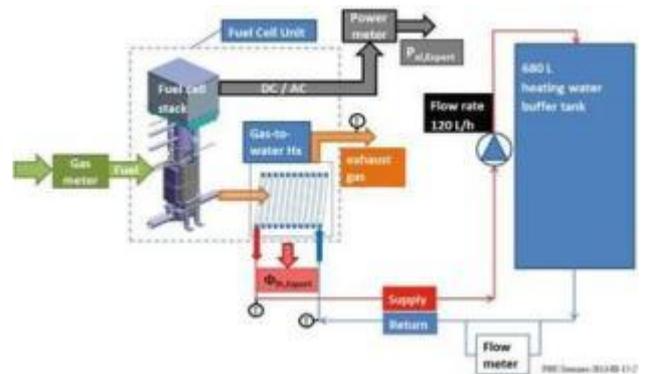
**Australia lagging on Renewable Energy Projects** *australian green energy company forced offshore*

New investment into renewable energy projects has dropped by 70 per cent, a report by the Climate Council says. In the last five years most countries around the world had accelerated action on climate change, with China and the United States two of the global leaders on the issue, the report, *Lagging Behind: Australia and the Global Response to Climate Change*, said. But while Australia was a crucial player in global climate action, it had "moved from a leader to laggard", the report said. In addition, the Climate Council said the Federal Government needed to make its position on renewable energy clear, before Australia lost even more investment in new energy projects. *investment in renewable energy drops 70pc report*

An Australian company which invented a renewable energy electricity generator says it was forced to move its operation to Germany because of a lack of opportunities in Australia. Ceramic Fuel Cells, a Melbourne-based CSIRO spin-off company, said its generator could cut electricity bills by up to 50 per cent for households and small businesses. But the company moved its operations to Germany two years ago to benefit from generous German government subsidies not on offer in Australia. Read more:



**Practical experience with a fuel-cell unit for combined heat and power chp generation on the building level**



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**Explaining climate change science & rebutting global warming misinformation**

*Scientific skepticism is healthy. Scientists should always challenge themselves to improve their understanding. Yet this isn't what happens with climate change denial. Skeptics vigorously criticise any evidence that supports man-made global warming and yet embrace any argument, op-ed, blog or study that purports to refute global warming. This website gets skeptical about global warming skepticism. Do their arguments have any scientific basis? What does the peer reviewed scientific literature say? <http://www.skepticalscience.com/>*

