## The New War Against the Planet - Why the Coal Must be Kept in the Hole

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It is a privilege to be asked to honour the memory of Lincoln Efford, one of the great leaders of the peace movement in our country. I never had the good fortune to meet him, but the story of his life is inspiring. Peace activist, pacifist, conscientious objector, anti-war campaigner, when all of these positions were much more difficult and dangerous than they are today. Despite serious illness for much of his life which caused constant pain, he was active in penal reform, civil liberties, nuclear disarmament, prisoners' rehabilitation and of course adult education, the way to empower working people to understand and change their world.

The rest of my talk will demonstrate how desperately we need large numbers of people with his qualities today.

He spent his life opposing war against nations and their people. We are now engaged in a war against the planet, and ultimately all its people. A few of us try to be conscientious objectors but the system we live in makes it difficult and we are constantly having to make compromises. I imagine pacifists in the second world war had similar difficulties trying to ensure nothing they did or bought contributed in any way to the war economy.

New Zealand is about to dramatically increase its participation in this current war. It's as though we have just sent our entire military to Afghanistan and Iraq and introduced conscription as well. Unless we try to stop this we are all complicit in it.

Originally the title of my talk was about lignite and the plans of Solid Energy. However since I was first invited New Zealand has embarked on an orgy of fossil fuel development of many kinds so I've decided to start with the big picture.

Since before the industrial revolution – let's say 1750 – human use of fossil fuels, along with a few other activities of lesser importance, has increased the concentration of carbon dioxide in the atmosphere from 280 ppm to 394ppm. That's an increase of more than a third. Carbon dioxide, and those lesser gases I mentioned, prevent the re-radiation of heat from the earth to space so that there is now much more energy coming in from the sun than going out. Obviously, that will cause the earth to heat up. It's like a bath tub where the flow in from the tap is greater than the flow out through the plug hole.

For the last three years, thanks to the work of James Hansen, whom some of you will have heard when he toured NZ in May, we have known that the concentration of carbon dioxide that will allow as much heat to leave the planet as comes in, is 350ppm. Countries are still setting targets of stopping carbon dioxide at 450ppm – 2 degrees warming - and yet have no plans for how to do

even that. But there has been no scientific rebuttal of Hansen's work establishing that 350 is the safe level.

We are so far above 350 now that climate change is already underway. Ice is melting in all the major glaciers, with dramatic reductions since the 1970s. The Arctic sea ice which partly melts every summer and refreezes every winter, gets less every summer and the north pole is likely to be ice free by the 2030s. The huge ice sheets on Greenland and West Antarctica are slowly melting. When the melting gets past a certain point they will slide into the sea, raising sea levels around the world. Last time the earth was two degrees warmer sea level was 25 metres higher. That takes a while – the rate seems to be about 5 metres per century. Once that is really underway it cannot be stopped even if all fossil fuel emissions cease.

I want you to imagine what a cubic km looks like. Now I want you to imagine two hundred of them. Imagine a 200km river of ice stretching from Christchurch in a straight line to Oamaru. It is a km wide and a km high – higher than Mt Cook, and squared. That's quite a lot of ice. The Greenland ice sheet is currently losing that much ice mass every year and the rate is accelerating.

Hansen has done the calculations to tell us if it is still possible to stop a runaway warming that will have no end, and will leave our descendants, starting with the grandchildren we already have, a planet that is short of fresh water and food, wracked with intense storms, droughts and floods, and severe economic and political instability.

He calculates that we still can – but only if we stop oil and gas exploration in extreme places, and phase out coal to zero by 2030. We also have to plant a lot more trees and manage the soil a lot better to take some carbon out of the atmosphere and store it long term. There can be no more talk of offsetting new carbon emissions by planting trees. We have to both stop those emissions <u>and</u> plant trees.

That is the context in which NZ government policy sits. That policy, the core of their economic policy, is to make this country rich by digging up and selling every deposit of fossil fuels we can find.

For the last 35 years of my life I've worked, among other things, on improving energy efficiency and renewable energy, thinking that this would reduce carbon emissions from fossil fuels. Only after I left my pressured job that leaves you little time to think, did the penny drop. These things make absolutely no difference to climate change. If you own a coal deposit you don't stop mining just because the local power station has been replaced by wind. You simply find another use for the coal and grow the economy faster. The ONLY thing that will make a difference is if the fossil fuel stays in the ground. Once we have achieved that – locking it up forever – then of course energy efficiency and renewable energy will be what gives us a prosperous way of life without fossil fuels. That is a huge challenge to our industrial system and our way of thinking. We have stopped using resources in the past because something better or cheaper came along, or because it ran out. There is no precedent at all for plugging an oil well or a coal mine, giving up that profit, and using something more expensive instead. But that is what we have to do – not just in NZ but around the world. NZ is a small country, but it is a good place to start, given the huge ramp up of coal and oil that is just starting. And the good news is that others around the world are working for the same goals. We are not alone, even though it often feels like it.

Permits have been issued for deep sea oil exploration around the NZ coast. You've probably heard of the one off the East Cape where in April Te Whanau Apanui and Greenpeace confronted the drill ship of Petrobras, a Brazilian oil company, and stopped them in their tracks. This drilling was at up to twice the depth of the Deep Water Horizon exploration well in the Gulf of Mexico which ruptured and spewed millions of tonnes of oil into the marine environment for many months. Apanui were incensed that they had not been consulted about this severe risk to their traditional fishing grounds. That has forged a wonderful alliance between those hapu and the environmental movement which will endure.

Drilling is due to start off the Canterbury coast soon, though one hopes that the terrible tragedy unfolding in Tauranga this week may cause some pause in those crazy plans.

Coal has long been mined on the West Coast. The Stockton mine on the Buller plateau produces about a million tonne a year of mainly high quality coking coal for export to India, Japan, China and elsewhere, for steel making. The price of coking coal has tripled in recent years and Solid Energy is expanding its activities alongside a number of private companies which are into the action too.

Solid Energy is about to take up its consent to turn Happy Valley, a rare remaining pristine ecosystem of red tussock wetlands, beech forest, brown kiwi and powelliphanta native giant snails – into the Cypress open cast coal mine. The consents were hard fought but ultimately lost in court by a determined group of mainly young people called Save Happy Valley, who camped in the wet and cold and occupied the valley for several months.

The Pike River mine is a bit further down the same high plateau, under the Paparoa National Park, and is owned by a private company with major Indian shareholding. This coal is so valuable that companies are keen to buy the mine despite its awful history and tenders have I understand already closed.

There are a number of other mines on the West coast but the other one I would mention is a proposal for a 6MT open cast mine at Denniston by Australian company Bathurst Resources, now calling itself Buller Coal. I guess it sounds a bit more local, but it isn't. They have just won consent from the West Coast regional council in a hearing where the West Coast Environment Network and I both presented evidence arguing that the RMA must take climate change into account. This argument was rejected by the commissioners and we are appealing to the Environment Court. James Hansen will give evidence by live videolink.

The commissioners' decision was interesting. They heard strong evidence from Forest and Bird, as well as local groups, that the Denniston plateau is a place of rare ecological value: conservation land, with unusual wetlands, stunted vegetation, dwarf trees, and wildlife – snails again, kiwi, geckos. The commissioners declared themselves "anguished" in making their decision and while they rejected my arguments about climate change by saying they had no jurisdiction to consider it, they virtually begged us to appeal. They clearly considered a higher authority should determine that issue.

The Denniston application was for one open pit, which the applicants insisted would remove only a small part of that rare ecosystem. But their website has their presentation to an industry conference, used also no doubt for raising capital, where they show a map of the plateau with eight potential open cast mines, saying they believe the resource is not 6Mt but 120-160 MT and they have a long term plan to mine it all. Even the first mine would at its peak out-produce Stockton.

This is all pretty conventional technology, but the unconventional is taking hold here too. Some coal seams can be rich but too difficult to mine for geological and technical reasons. But they won't be left alone any longer. Underground coal gasification (UCG) seals off sections of the seam and burns them under the ground, making synthesis gas which is a mix of methane, hydrogen, carbon monoxide and some others. It can be used as a fuel in a power station or nearby industry. Solid Energy has a UCG pilot near Huntly which is probably designed to produce fuel for the Huntly power station or local dairy factories.

Other coal seams contain significant quantities of methane – natural gas – which can be extracted from the coal. L&M, a company involved in coal and other mining in NZ for many years, and a shareholder in Pike, has a permit for a coal seam methane trial at Ohai in Southland. They also have a permit for a small electricity generator and a contract to sell the gas-fired electricity to the aluminium smelter.

No-one I know can recall any resource consent process for either of these pilots. I only learned about the Ohai one a week ago and the Huntly one about two weeks ago. And I have had my eyes and ears reasonably well open.

Both these technologies may involve hydro-fracturing, or fracking, where very high pressure water, sand and chemicals are forced into the rock to split cracks in it through which the gas can escape. Fracking in parts of the US has resulted in fracking chemicals like toluene, xylene and hexavalent chromium – three highly toxic materials – ending up in the underground water supplies and poisoning farming, animals and people. It is worrying that most regional councils require no resource consent for fracking and there is little information around on just what these companies are doing.

UCG releases toluene and xylene from the coal where it is a natural contaminant and the Cougar UCG plant in Queensland has just been closed because levels of these toxins were found in the water and in cows grazing in the area. Farmers should be very concerned at any proposals to use these technologies near their farm.

All forms of coal mining and use have serious local environmental effects but of course the great unseen effect is to further destabilise the climate.

NZ has put a great deal of effort into securing title to the continental shelf surrounding our country which is many times larger than our Exclusive Economic Zone. The reason is not hard to find - there are rich mineral deposits there. Of course, mining under the seabed is not very convenient but the technology exists to do it – and potentially to make a huge mess in the marine environment. One of the minerals is frozen methane. These deposits are abundant round the world and are not yet able to be mined but serious work is going into it. It is impossible to see how this methane could be unfrozen and captured without a great deal being released into the atmosphere. Methane is a much more powerful climate changing gas than carbon dioxide, though so far there is very much less of it.

Our Government has expressed great enthusiasm for mining methane hydrates.

Then there are the Southland lignites and I've finally got to the topic I promised you I would talk about.

NZ has the second largest coal resource per capita in the world, after Australia. Of course, that's partly because we have a lot of land and not many capita, but it still makes us potentially a serious exporter. Of those coal resources, some 80% are lignite in Southland and Central Otago and to date it has hardly been touched.

It's not hard to understand why. Lignite is the lowest quality of all the coals, and is half water. Some geologists don't even regard it as coal at all. It's more like an advanced stage of peat that could be coal one day if we left it a few million years.

It is mostly close to the surface so can be mined in open pits. It is dirty and inefficient to burn and not economic to transport because of the high water content. Solid Energy mines a little of it now to supply the Fonterra Edendale dairy factory. (It's a little known fact, particularly in our export markets, that our clean green wholesome dairy products are produced by using the dirtiest and most climate changing fuel in the world.)

So far tonight we have been talking millions of tonnes – 6 million at Denniston, up to 160m on the whole plateau. One million a year produced at Stockton. With lignite we are talking <u>billions</u> – the economically recoverable resource is believed to be 6.8 billion tonnes. Solid Energy currently has access to nearly half of that. If it is all extracted that's 8.4 billion tonnes of carbon dioxide added to the atmosphere, over some years. That compares with NZ's annual climate change emissions of all gases from all sources of 75 <u>million</u> tonnes. At the rate Solid

Energy plans to use it, it would add around 20% to our annual emissions for many years, though not all those emissions would occur in NZ. Just the lignite projects already announced would make all our efforts to drive smaller cars, cycle and use public transport, improve energy efficiency at home, buy low energy appliances and products, eat less meat, whatever we are doing to try to reduce our carbon footprint, these projects would make it look completely irrelevant.

Solid Energy, the same company that mines Stockton, that is about to plough into Happy Valley and is piloting UCG at Huntly, is a large State Owned Enterprise. That means it's owned by you and me, but we don't get any say in how it's run. We elect a government to do that on our behalf but apart from choosing the Board of Directors government is totally hands off. Anything to do with the environmental impact of Solid Energy's activities is an "operational matter" and ministers won't even answer questions about it, let alone give Solid Energy any instructions to clean up its act.

The Prime Minister however is not ignoring the lignite proposals, he is actively supporting and encouraging them.

There are three proposed processes.

Solid Energy has found a way of squeezing the water out of lignite to make briquettes which are more efficient to burn and cheaper to transport. The company trumpets that they burn with less carbon dioxide emissions than lignite, but when you add in the processing energy the total climate impact is greater than burning lignite straight. It is being done solely to make it costeffective to export it and transport it further within NZ.

The company has consent to build a pilot plant at Mataura and the first sod has been turned. It will take 140,000 tonnes a year of lignite from the existing mine, no doubt expanded somewhat, and produce 90,000 tonnes a year of briquettes. This was regarded as being so small it did not need to be publicly notified and there was no consent hearing and no opportunity for the public to debate whether embarking on the thin end of the wedge of this huge programme is a good idea.

In a year's time, if they succeed in marketing the briquettes overseas they will apply for consent to build a full scale plant in the district. This would use 1.4 million tonnes a year and produce just under a million tonnes of briquettes, mainly for export, releasing 1.75MT of carbon dioxide each year.

The second process is to make urea, a nitrogen fertiliser, from lignite. We currently make it from natural gas which has lower emissions than coal. Urea allows farmers to establish intensive dairying on soils not really suited for it, and greatly increases nitrogen runoff into rivers and ground water. Urea is a main driver of the problems you have in Canterbury with overuse of aquifers and rivers for irrigation, and contamination of those waters with nitrogen and animal manure. Climate change will tend to make Canterbury drier and shrink the

glaciers that provide snow melt. So we have an interesting chain of events here – more urea to run more cows requiring more water, contaminating more water, and adding to climate change which brings more drought, which will require more water. Solid Energy says much of the urea will be for export but you can bet there will be advertising to increase its use locally as well.

This project is scheduled to start in around 3 years and would use 2MT/y of lignite, produce twice as much urea each year as NZ currently uses, and 2.5MT/y of carbon dioxide equivalent.

The biggest and worst project though, is to make lignite into diesel. Solid Energy is set to capitalise on peak oil and rising fuel prices to make all NZ's diesel from lignite. The first plant would use 10MT/y, making 35,000 tones of diesel with a total carbon footprint of 12.5MT carbon dioxide. Longer term plans are to build a second one after that, to provide all of NZ's diesel needs. If you burn a litre of this diesel made from lignite, the total emissions will be about double what they are now when you burn a litre made from petroleum.

Solid Energy has allowed and encouraged people to draw the inference that making diesel here will protect us from further oil shocks and price rises. Just as making dairy products here gives us cheap milk and cheese which I know you all appreciate from the kindly Fonterra.

The diesel will, of course, be sold in a world market at world prices. If we don't want to pay those prices it will go elsewhere.

So: a company you own but can't control plans to massively increase our carbon dioxide emissions, laughing in the face of your efforts to reduce them. But wait – there's more. Government will use your taxes to subsidise them to do this.

At the end of next year NZ will be accountable internationally for any increase in its greenhouse gases since 1990. We don't know what international regime will be in place after that to account for greenhouse gases but it is likely there will be a rising price on carbon emissions. Solid Energy will not face this price for the 17 million tonnes of carbon dioxide its projects will lead to each year, so the taxpayer will pay at least part of its share. We can't even find out just what, if anything, it will pay as that is a personal decision by the minister under the Emissions Trading Scam – sorry, Scheme, and he hasn't yet decided.

Solid Energy has said it will "meet its climate change obligations in full". That is a very different thing from having no impact on climate. The requirements of the ETS whether they get free credits or not are pathetically easy to meet and will cost them little and do nothing to reduce climate impacts.

The company talks very confidently about carbon capture and storage, as do most fossil fuel companies who want to continue to be allowed to operate. CCS means capturing the carbon dioxide from the chimney stack, separating it from other gases, liquefying it to reduce its volume, and sending it along a pipeline to a suitable underground site, such as a deep salty aquifer, where it can be stored forever without leaking out. It's just as well the oil industry has a lot of pigs – a term they use for blocks they put in the pipeline to separate different batches of oil – because they are going to need flying lessons for all of them.

Even if CCS worked perfectly according to the most optimistic dreams of the fossil fuel industry, it could not capture and store any emissions from transport – only from stationary uses like power stations or briquetting plants. So burning the diesel from lignite would still create emissions the same as today. A minor problem is that no suitable underground sites have been identified in Southland and the carbon dioxide might have to be sent by pipeline to Canterbury to find a suitable site. Assuming they are earthquake free, of course. A more serious analysis suggests that if only 20% of all the carbon dioxide emissions world wide were to be captured and sequestered it would require an infrastructure of pipes and pumps and wells 1.7 times the total oil industry infrastructure world wide. That infrastructure was built over many decades and returned a huge profit. This infrastructure would have to be built virtually instantly to prevent dangerous climate change and would cost billions but produce no return. Where are those pigs again?

It is really clear to me and to many other more qualified analysts that CCS is never going to happen on any scale that could make a difference.

Even without the cost of CCS the cost of the proposed lignite projects is measured in billions of dollars, not millions. Where is that capital going to come from? Solid Energy hasn't got it and neither has the Government. Aha – if this government is returned it plans, next year, to sell half of several SOEs including Solid Energy. Who has spare capital and is scouring the world looking for investment in energy opportunities? China. So expect to see half of Solid Energy owned by a Chinese firm by the end of next year – just in time to build that full scale briquetting plant.

I'm not supportive of selling state owned assets and I think key industries should remain in NZ hands. But if it is to be overseas owned I have no prejudice against China – <u>except</u> for one thing. We have a Free Trade Agreement with China that contains investor-state dispute provisions whereby any firm that has investments here can take a dispute to arbitration if any government policy reduces their profitability. That means, unless the government tells them otherwise at the time they invest, they are entitled to expect that current rules on climate change and carbon charges will remain as pathetic as they are now.

Any future government that imposed a realistic price on carbon emissions, or tougher environmental standards on coal mining, could be taken to an unelected panel of officials in a secret hearing and required to pay millions in compensation to that Chinese investor. Of course, that is unlikely to happen – a government would just bow to the threat and decide not to tighten the climate change regime – and we would never know what had gone on behind the scenes.

A wider treaty - the Trans-Pacific partnership – is currently being negotiated containing a worse version of these provisions. If it is agreed to, there would be

seven nations who would be able to sue future governments in this way, including the US which is driving this policy hard.

In Southland the mood is mostly euphoric – they think the lignite projects will bring economic development and jobs. As an aside, you might like to think of any coal mining towns you know. Are they obviously thriving, prosperous communities with high average incomes and low unemployment?

Despite this majority view, there is growing unease in the Southland community about the loss of very good quality farmland (Solid Energy has already bought up 4,000 ha of farms for mining related activities); and about noise, dust, vibration, traffic and health effects of living near major new mining activity. People are asking what they can do.

What's happening in NZ is mirrored around the world as increasing demand for fossil fuels coincides with depletion of all the easy sources. The industry is scrambling to get it from wherever it can, at whatever environmental cost, and at increasing financial cost. We hear daily of more crazy schemes: fracking of shale rock to release gas and poison water (and a link with earthquakes is being investigated and looking increasingly credible); drilling for oil under 3-6 km of ocean with the probability of more Gulf of Mexico type gigantic spills; drilling under the Arctic as soon as it is ice-free; exploring Antarctica; blasting the tops of mountains with explosives to get coal more cheaply and dumping the spoil in the river beds, as in Appalachia, and NZ's Mt Augustus; burning coal underground with risks of out of control fires and release of toxic chemicals; making oil products from coal and even from not-quite-yet-coal; and the grand-daddy of them all: heating the tar sands of Alberta to release the dirtiest oil in an intensely climate-changing process.

The good news, to the extent there is any, is that civil disobedience is growing around these projects and some of them are being stopped.

The Cougar underground coal gasification project in Queensland was stopped after toluene and xylene were found in the water supply – stopped by a group of ordinary citizens – farmers – calling their movement "Lock the Gates".

In Washington in August 1252 people were arrested peacefully occupying the area in front of the White House, petitioning Obama to stop the keystone pipeline, planned to bring oil from the Alberta tar sands to Texas for refining. The tar sands contain enough carbon, if it were all mined, to raise atmospheric carbon dioxide by 200 ppm. The organisers include names you will recognize, like James Hansen, Wendell Berry, Wes Jackson, Naomi Klein, Bill McKibben, David Suzuki.

To me it was an example of a text book protest. They chose the most important target in the fight against climate change; they identified exactly what could achieve their goal, as a personal decision by Obama was needed for the project to go ahead; they communicated the urgency and seriousness brilliantly (Hansen described it as *"a fifteen hundred mile fuse to the biggest carbon bomb on the* 

continent..."

"It's time to stop letting corporate power make the most important decisions our planet faces."....)

They urged seniors and middle class people and college professors and business people to come well dressed and behave respectfully so it was clearly not a rabble or only idealistic young people; each day as a few hundred were arrested and handcuffed and hauled off for processing they had a few hundred more to take their places; and now the movement has spread so that wherever Obama goes in the country he is confronted by groups of people with placards throwing his own election slogans back at him. It's too early to know what effect this will have, but if construction does start on the pipeline it is going to face opposition and blockade at every step of its fifteen hundred miles.

Also in the US, a group fronted by 15 teenagers (but with some older and very clever minds behind the scenes) is suing the US government under the Constitution (which guarantees equal rights for all people) for failing to protect the rights of future generations. You can read the impressive paper they cite as evidence on Hansen's website

www.columbia.edu/~jeh1/mailings/2011/20110505\_CaseForYoungPeople.pdf

There is even more good news in the US, reported by Lester Brown in **World on the Edge**:

Since 2000, 152 coal fired plants in the United States have been defeated or abandoned.

In June 2007, Florida refused to license a huge coal plant because the utility proposing it could not prove that building the plant would be cheaper than investing in efficiency or renewable energy. This led to the quiet withdrawal of four other coal plant proposals in the state. 2

In 2008, four of the largest investment banks announced that any future lending for coal-fired power would be contingent on the utilities demonstrating that the plants would be economically viable with a future cost on carbon emissions.

In 2010, several leading U.S. investment banks ceased lending to companies involved in mountaintop removal coal mining.

If you can't embarrass the fossil fuel companies into changing, it may be easier to embarrass their funders, who have plenty of other options for their capital.

A number of US coal plants are being closed, and 80% of them could be if the energy efficiency level of the other 49 states were raised to that of New York.

Between 2007 and 2010, U.S. coal use dropped 8 percent. During the same period, and despite the recession, 300 new wind farms came online.

The phase out is making some progress in Denmark, Hungary, Canada, Scotland; and even China, while still building coal plants, is leading the world in renewables like wind and solar.

In Australia a large new lignite power plant was approved at only a third of its proposed size, because of climate change, and none of the four main banks will fund it. Now the Federal Government is conducting a bidding round to pay 2,000 MW of the dirtiest coal power stations to close.

It has been clear for some time now that governments around the world will not act on climate change. It's not that they don't know the science and understand it. But the power of corporate lobbying is just too strong.

This includes campaign donations, especially in the US. You can look up the actions of the Koch brothers, multi-billionaire funders of the fossil fuel lobby in the US. You can puzzle, as I did for years, why successive NZ governments, both red and blue, have launched massive orgies of new motorway building at a time when oil is getting much more expensive and government is cash-strapped. Then you can look at the fact that the Road Transport Association is one of the major funders of both large parties.

You can watch the gradual roll back of NZ climate change policy – the cancellation of the carbon tax announced in 2002, and the animal emissions research levy, dubbed a "fart tax" by Federated Farmers and the National Party; you can listen to former Minister Pete Hodgson, who developed that proposal, speaking at the 2006 climate change conference, where he said to those gathered who wanted real action, "give me a political mandate". In other words, lobby harder and more successfully than NZ's biggest and best funded businesses. You can watch, as I did, the regional manager of Rio Tinto turn up from Asia and threaten the select committee considering the ETS, with the withdrawal of the aluminium smelter and its 1200 jobs. And watch every other MP in the room fawning and falling over themselves to tug their forelocks. You can watch even the pathetically weak provisions of the Emissions Trading Scheme being steadily watered down and delayed after the lobbying of Fonterra, farmers, and energy intensive business.

This is why politicians don't act. And until the public are demanding action, any political party that even started to do what is necessary would be thrown out promptly. So changing the public's priorities and demands is crucial.

This is a time of major instability and social change, world wide. Who would have thought Egyptian young people, using facebook and twitter, could get rid of their despotic leader and change their government? Likewise Libya, Algeria, maybe Syria?

Who would have thought the Federal Reserve bank in the US would become a target for occupations nation-wide, with clear demands to roll back the power of big business and banking, and govern in the interests of all the people and the environment?

Who would have thought that would spread around the world, including to Christchurch, where an "Occupy!" march is planned for tomorrow? Is anyone going?

Then there's the amazing group AVAAZ! A network of people worldwide who launch challenges to governments to change policies. They succeed in getting a million or more signatures on their petitions or statements, they approach the UN, states friendly to dictatorships who might have influence, and governments and they get change. One reason is that they make it so easy to participate – a clear summary of the issue and the action needed, plus one click of the mouse to support it. This is something where everyone can add their voice, even those who can't leave the house or who are to busy with other activism to do more on that issue.

This is where the action is at now. We will not get government action until the people demand it, loudly, clearly, and by majority.

That's why I'm working a lot in my retirement with Coal Action Network Aotearoa, a nation wide organization aiming to inform people about the urgent need to phase out coal, and campaigning for climate justice. We are planning a summer festival January 20-23, camping on the land of the one farmer at Mataura who has refused to sell his land to Solid Energy. Registrations will shortly be open on the website and this paper, which will be on your website, will be updated with that website address as soon as it is available. As well as family camping, strategy workshops, training in non-violent direct action, music and shared meals there will be an open day on the Sunday to engage with the Southland community, hear their concerns about the lignite plans, share the information we have, and see how we might work together.

If you would like to be on CANA's mailing list and get regular newsletter on what is happening with coal, go to <u>www.coalactionnetwork.wordpress.com</u> and register your email address.

If we are to overcome this biggest challenge ever to humanity we need a lot more Lincoln Effords – people who are willing to put themselves on the line for the sake of their grandchildren and future generations. People who will turn out in civil disobedience when the occasion demands. People who want to be a part of a movement where we all care for each other, work for a common cause, don't get side tracked by internal disputes, strategise wisely so we don't waste energy but focus on where we can achieve change.

In the end, governments and corporations can't stand forever against a people's movement that is united and totally determined.

We haven't much time. But there are signs that a people's movement for change is building and I'm hoping you will choose to be part of it.

## What is Solid Energy Proposing?

Plant	Output	T lignite/y			CO2e/y	
•	Briquettes (pilot	) .1MT	.140	МТ	.175MT	
	full scale	1 MT	1.4	MT	1.75 MT	
•	Diesel	2B litres/y	10	MT	12.5 MT	
•	Urea	1.2 MT/y	2	MT	2.5 MT	
•	Total emissions	around			17 MT	