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TO BEAT GLOBAL WARMING: THINGS WE HAVE TO KNOW AND THINGS WE TO HAVE TO DO

WE MUST NOW RECOGNIZE and appreciate two things; firstly: Global Warming can be stopped, and secondly: Stopping Global Warming can be done at negligible cost. Our personal aims therefore, also become two fold: Each of us must immediately commence doing those things that insure that our planetary over heating stops. And secondly we must convince others that the goal of restoring climatic stability is both possible and practical. We must in turn insure that everybody accepts his or her own measure of responsibility in being part of winning the battle against the cancer of Global Warming. We must ensure that everybody knows clearly how he or she can help.

The utterly inevitable alternative is a thousand years of never-ending world climatic change, a thousand years of utterly unpredictable weather: an incomprehensible future of endless supposedly natural disasters.

Restoring stability to our weather systems can only be accomplished by the will and determination of what must become an ever-growing number of thoughtful, responsible and decisive people. It is imperative we make those numbers grow fast.

I think most of us want to live in a safe, free and interesting society, a society in which opportunities to better oneself by supplying

others, in the our society with cheaper and better goods and services, is the natural order of things. I believe most of us want to live in, and be part, of a world civilization based on high levels of sustainable affluence.

Global Warming and its consequential climate destabilization are threatening everything we aspire to and everything we hold dear. The resultant changes to world climates and weather patterns present the greatest threat civilized man has ever faced. And must be clearly understood that Global Warming also presents the greatest current threat to all our World's ecological systems.

Global Warming and its resultant cancerous climate change are already causing devastation and havoc in places all across the world. No place is immune. Damage costs are already exceeding any cost benefit claimed for fossil fuel energy systems.

The paradigms of fossil fuel use, the reliance and apparent dependency on agricultural chemicals, and the almost universal structured aversion to anything nuclear are so pervasive, so all-embracing, they seem impossible to challenge. But challenge them we will, and change them we must. Skeptics we must become. No longer can we tolerate our thin, vulnerable, almost negligible

but very valuable atmosphere being used as a dumpsite for fossil fuel waste and the carbon dioxide fumes spewing from the destruction of our world's soils.

It is now blatantly obvious, Global Warming is caused by a nett increase of greenhouse gasses entering the atmosphere. Those gasses come from us burning fossil fuels and us destroying soil fertility. (See Chapter 5 and Chapter 6).

Carbon dioxide levels in the atmosphere today now exceed 370 parts per million. For the previous few million years they were around 270 ppm. We have to get them back under 300 ppm to re-stabilize world weather.

The program to do so has two main thrusts. First, we modify our agricultural practices to increase soil fertility levels, instead of as now, decreasing them. This process will extract massive quantities of carbon dioxide out of the atmosphere and return levels to near normal. That could be achieved in little more than a decade. Secondly and concurrently, we must change our energy systems away from fossil fuels to other energy systems to prevent dangerously high levels of greenhouse gasses from ever surreptitiously recurring. (See Chapter 8).

If as individuals we do nothing but blindly put our faith in governments and their bureaucracies, it will never happen in time. And then, all too suddenly, it will be too late. Constant climatic instability with all its deadly consequences will become irreversible. Institutions ignored by the people for too long, can no longer be trusted. Our governments have been systematically manoeuvred to consistently comply with the requirements of cash loaded fossil carbon interests. The big interests themselves are steered by their own internal, inherent self-interest and their own big money predilections. Unfortunately there is no concentrated big money interest in stabilizing world weather. There is thus no financial balance. Balance has therefore to come from people power actions. People power is millions of individuals creating a new political imperative.

We all vote and we have three ways we vote that affects our society. We vote at the ballot box, we

vote with our wallets, and we vote with our voices, our pens and our protest. So individually we modify our buying patterns and make our wallets send the message. Simultaneously we harass our local members of parliament to move and manoeuvre in the way we demand. And so we change things and create systems and structures that insures Global Warming comes to a speedy end.

There will be a lot of opposition to doing what we must do. Power and very big money is involved. But no matter, individuals in concert can move mountains. You must never believe your effort and your voice and your vote can't amount to much, for you would be wrong. The writer, Betty Reese gave us an apt quote: "If you think the efforts of one individual will be nothing, then you have never been in bed with a mosquito".

Once we appreciate what we need to do, start doing it and tell others how they can help. Things will then change. Climates will begin to stabilize. Sea levels will stop rising. Wild, freakish, unpredictable weather phenomena can stop being a constant expectation. And people will again take control over their destiny.

Preventing Global Warming is an immediate and absolute planetary necessity. Therefore we now must accept as irrelevant the myriads of inconsequential environmental issues out there, issues that cloud the all-pervading dangers of destabilizing the world's climate.

ENERGY SUPPLIES FOR TRANSPORT, MOTOR VEHICLES, SHIPS and PLANES

When everyone owns a car, as in most Western societies, how can an oil company sell more fuel? The obvious answer is to have the engines made bigger and the vehicles heavier. Then hopefully sell the concept of four driving wheels. Then sell this very enlarged, over-engined package as "increased safety". In addition bribe, coerce or inveigle legislators into tax breaks for such fuel hungry vehicles. It's happened. A good example: In rural Australia where distances are great, one might presume gas-guzzlers would be a disincentive. So taxpayers are manipulated to

fund tax breaks on country fuel consumption. And the automakers also love it!

We want self-contained motor transport, and self-contained systems need fuel they can carry on board. For that we have to select suitable non-fossil fuels. The only both excellent and viable choices are ethanol and biodiesel. Hydrogen is at best a vague and distant possibility. Hydrogen is too far down the track to be of any relevance whatever in stopping Global Warming. The “hydrogen economy” is a marketing gimmick designed to placate non-technical but responsible citizens. It is also used to enthuse non-technical antinuclear crusaders.

The absolute ideal motor vehicle design for the near future should have engines that run on either biodiesel or high ethanol blends. The perfect automobile is to be a hybrid using a flex-fuel engine – a hybrid being an internal combustion engine in combination with a battery electric drive. Both engines produce minimal to absolute zero nett carbon dioxide emissions. Hybrid engines will also deliver exceptional miles per gallon. Hybrid cars are now on the market. Flex-fuels car have been on the market for a decade or more. Which company will be first with a flex-fuel hybrid? Whoever it is, support them. Support them by buying their cars and advocating others to buy their cars.

With those cars, if everybody on Earth suddenly had a Western world standard of living and drove cars the way we do in Western nations now, fuel supplies would not be a problem in any way, shape or form. Several tropical countries could individually grow enough sugar cane and produce enough ethanol to fuel every single one of them. Ethanol and biodiesel production has never been a problem and could never be. Every wet and warm country on the planet can become an energy supplier.

How do we force a rapid widespread change to ethanol and biodiesel? There are many things we can and must do.

Cancel Biofuel Restrictions:

Every law that restricts the amount of

ethanol in an automotive fuel must be cancelled immediately. Simply label the blend ratio and let us, the customers, decide what we want to buy.

Petrol and Ethanol Prices:

Explain to people that to combat Global Warming, the price ratio between petrol must be restructured and taxed so as to be always dearer than ethanol fuels at the pump.

The gasoline manufacturing process itself requires oil to run it, so with oil at say US\$40/€40 a barrel gasoline’s raw material costs hover around US\$0.28 a litre or US\$1.06 a US gallon. (In the oil trade a barrel is taken as 42 US gallons or 159 litres.) To those costs must be added manufacturing costs, shipping costs and the often numerous hidden subsidies the oil industries have acquired. Gasoline costs are therefore closer to US\$0.40 per litre. To these also, and quite rightly, should be added the military costs incurred in defending the oil production and delivery structure. And we know by recent experience, they can be considerable. This must be understood by all.

Ethanol costs are around US\$0.25 to \$0.35 per litre at the distillery. So people rightly ask, “Why isn’t ethanol at every service station?”

One reason is that oil prices are too easily fluctuated so as to destroy any reasonable continuity in market supply and demand for ethanol. Start serious ethanol production and the oil producers simply fluctuate the world price of oil. They drop it for a few months and create huge cash flow problem for any ethanol industry start-up, and in doing so they bankrupt them.

Private investment in large-scale ethanol production is too risky without our own governments intervening with suitable protective legislation. Protective legalization is necessary and is indeed perfectly justifiable. Individual businesses can’t fight tightly structured foreign governments that control world markets. We must tell our government we want our vulnerability to nation-sized industrial sabotage to end. Global Warming and good old horse sense must become the major factor in determining and insuring independent and assured fuel suppliers for our

transport industries. Inform people of these realities. Oil producers have been holding us over their barrel for too long. Tell your government you want it to end.

Point out how the world price of oil never significantly exceeded \$45/€45 a barrel for any length of time because oil producers know that much above that price biofuels become competitive and a biofuel industry could become established. For the oil producers, the West is the goose that keeps laying the golden egg. Why would they spoil it?

The only possible exception is if they decide that biofuels are so inevitable that they might as well get as much money as they can before that inevitability becomes a reality.

What Is Biodiesel?:

Most people, at least in my country, have no idea what biodiesel actually is. So tell them. Uninformed people cannot make wise decisions and Global Warming simply cannot be ignored. Explain that diesel engines can actually run on ordinary vegetable oil: canola oil, coconut oil, whatever. But refined diesel works better and biodiesel is better still. Explain that any vegetable oil (even used cooking oil) mixed with ethanol and warmed with caustic soda undergoes a chemical reaction. The two substances formed in the reaction are glycerol (ordinary glycerin) and a modified oil called biodiesel. Also, unlike petroleum-derived diesel, spills of biodiesel eventually completely biodegrade. (The *Exxon Valdez* spill would not have been a problem if the ship had been carrying biodiesel.) Glycerol, the byproduct in biodiesel production, is a valuable raw material in the plastics and pharmaceutical industries. Tell your friends.

Motorists to Choose What Fuel:

As an immediate start, every service station should have ethanol blends available now. Biodiesel must rapidly follow and both fuels must be cheaper at the pump than straight petroleum fuels. At the very least, energy for energy, they must be no dearer. Then the decision will be

ours. Then ask for biofuels every time you fill up. Convince your friends to do likewise. They live here too.

No Added Ethanol Marketing Signs:

If at a service station you see a sign “boasting” no ethanol in their fuel, tell them you don’t appreciate the anti-ethanol marketing campaign. Tell them to get rid of the sign or you won’t be back.

Your Existing Vehicle:

Check with the manufacturer: Can your vehicle operate perfectly on ethanol blends, or for a diesel car, on biodiesel? If so, always demand these fuels when filling up. If your service station doesn’t stock ethanol blends and biodiesel now, constant asking ensures they soon will. It can be the same at marinas. Make it happen by demonstrating how they can make you a happy and regular customer.

Diesel Powered Vehicles:

For ease of mind check that the manufacturer’s warranty covers biodiesel use. Almost invariably they do, as biodiesel is better for the engine. Then use it in your vehicle and start the halt on Global Warming. As an extra bonus your engine will last longer.

When Your Vehicle Is Not Compatible:

If the manufacturer says they didn’t make your particular automobile ethanol-blend compatible, that’s unfortunate. But you can still refuse to fill up at a service station that doesn’t have ethanol blends available for others. When you get your next car you can then be assured there will be plenty of biofuel outlets.

Buying a New Car:

Before you buy a new car make sure it likes ethanol blends. Even better, go for “flex-fuel” engines that can operate on up to E85. (That’s 85% ethanol.) Flex-fuel engines that can use E100 are only now becoming available and then only in Brazil. An E85 flex-fuel hybrid vehicle is close to perfect and at a negligible, if any, increase

in initial cost. Fuel cost savings with hybrids more than compensate. Don't ever buy a car that isn't compatible with some measure of ethanol enrichment. If they are not immediately available, ask anyway. That way you'll get them thinking. That way you'll get their wheels moving.

High Powered Cars:

Some people like to drive big cars with big engines. That's fine; provided they run on biofuels. People driving big cars with big engines engineered solely for petroleum fuels are the oil industry's puppets. They are dancing exactly how the PR image builders planned. Make the change. Demand your new big V8 is tuned for ethanol. It can deliver more power and also shows the owner is no fool. Let's tax big petrol engines out of existence now.

Second Hand Vehicles:

Ask the dealer "will it run on ethanol blends?" Get a suitable warranty. Remember, in the very near future cars that can't use ethanol blends, or don't accept biodiesel, won't hold their price as easily as cars that can.

Outboard Motors, Mowers, Tractors.

Aeroplanes:

Demand they be ethanol compatible. Or if diesel, they must accept biodiesel. If enough of us demand these things, they will happen.

Race Cars and Race Boats:

If methanol based, get your sports organization to switch from toxic, corrosive, fossil-derived methanol, to safer non-corrosive, non-toxic, biologically derived, ethanol. This will also enhance the responsible image and community acceptance of your sport.

Biodiesel In Commercial Jet Planes:

Biodiesel can now be produced that can readily blend with Jet-A aviation fuel. But the international treaty on zero taxes for aviation fuels effectively guarantees fossil fuels be used in international air travel. That's madness. That insane and poisonous

treaty must be rescinded. Taxes should be structured to ultimately eliminate petroleum fuel use from the air transport industries, not encourage it. How this could be achieved needs some astute thinking by wise and thoughtful people more familiar with the industry. Somebody must do it. Can you?

Oil Powered Ships:

Most ships now have diesel engines. They are either internal combustion engines or turbines. Either can operate perfectly well on biodiesel. When you book a passage on a passenger liner or on a cruise liner, first ask if it runs on biofuels. If not, think about a different holiday. Tell your friends to do the same.

Nuclear Powered Ships:

Antinuclear activists have been loud in their condemnation of nuclear powered ships. For example: New Zealand decided some time ago to not let British or American nuclear powered ships into its harbours. The New Zealand Committee on Nuclear Propulsion, after careful deliberation and after recognizing the thousands of safe ship years already logged by nuclear powered vessels finally concluded they were safe. They were then allowed to berth in New Zealand ports. However the fossil fuel antinuclear lobby, with their finely tuned and well trained expertise won the political battle. The New Zealand Government chickened out politically and banned their entry, but they are now removing their blinkers and relenting. Don't let your government be so easily manipulated.

Nuclear powered passenger liners would be safe but possibly not yet sufficiently safe against hijackers. Book a holiday on the first nuclear powered cruise ship when they become utterly pointless to hijack. As soon as nuclear energy becomes more generally accepted, such ships will, most certainly be developed.

Make Petroleum Fuels Non-Tax-deductible:

All taxpayers are being made to pay for the results of climate change caused by burning fossil fuels. Why? It should be paid by those using the fuel. Currently, when burning fossil

fuels in a business enterprise the fuel cost is tax deductible. Let's keep the business cost of ethanol and biodiesel a deductible expense, but not fossil fuels. Make sure your political representatives know that's what you want and why, and then demand action from them.

Subsidies and Tariffs:

Our world is at war with Global Warming and the world must win. To win, it is essential that biofuels must be kept more than competitive against petroleum-based fuels at the pump, (or in Australia, the petrol browser). Remember, subsidies and taxes are legitimate weapons in time of war. So let's use them to beat Global Warming.

Our policy must always be to use inflated petroleum taxes to subsidize the change to biofuels. The oil lobby will try to promote this as an attack on "innocent motorists". Or they will suggest great harm to the national economy. They will probably recruit wilderness societies or biodiversity advocates and invent new causes. These tactics must be expected. Always dispute such manufactured fictions. We must no longer let the usual lies and half-truths sink the adoption of biofuels.

The world price of oil is generally manipulated to hover around US\$45/€45 a barrel, never above for any extended period. So we simply play the game in reverse.

It would depend on individual countries and their ethanol production facilities, but let's take ethanol as viable to produce at US\$0.35 a litre. Per barrel that's US\$55 for finished bulk ethanol at the distillery.

Two possible systems: First, if the world price of oil is below, say \$55 a barrel, then pay the ethanol producer the difference as a subsidy. If oil is \$40 or \$0.25 a litre it will be cheaper at the pump so pay the ethanol producer a subsidy of \$15 dollars a barrel or \$0.10 per litre for every litre sold.

If the world oil price is dropped to \$10 a barrel, oil at the pump will be cheaper, so again pay the producer the difference, which would be \$45 a

barrel or \$0.28 a litre.

Ultimately the price at the pump will be determined by the actual cost of ethanol not some cynically manipulated world oil price.

Secondly: An alternative that governments would obviously prefer: have the state collect an excise tax on imported oil so that the effective oil price landed and passed through customs is always US\$55 a barrel. The tariff, excise or subsidy to producers could be based, for example on world oil price averaged over the previous three months. If world oil prices are \$40, the state charges \$15 a barrel excise. If \$30 they collect \$25 a barrel. Changing to biofuels thus becomes self-funding

If a country can't produce enough ethanol, or local production is inefficient, import it. If it is decided the local ethanol industry needs additional support, then support it the same as with any other local industry. But always keep oil more expensive, and for a long overdue change, make oil taxes pay alternative energy subsidies.

Some states tax automotive fuels at the final distribution point. This too is easy. Simply tax the petroleum content higher than the biofuel content. Always insure the petroleum option is noticeably more expensive.

The above are just some suggestions: Taxes, tariffs, excise, subsidies or whatever, one way or another, ethanol must always be made the cheaper fuel at the local service station for spark ignition engines and biodiesel must always be cheaper than petroleum diesel.

Ethanol, Not From Sugar cane:

Making ethanol from grains or sugar beet is generally more expensive than from sugar cane. But we want the ethanol. If it is deemed necessary to assist grain or beet producers, then pay them a subsidy.

But be aware. The preferred option of the oil and gas companies is to impose a surcharge, tax or excise on imported sugar or ethanol to "assist local grain ethanol production". This is what they always lobby for as such a surcharge always results in artificially forcing up local ethanol prices way above petroleum prices.

The final outcome being that total ethanol production will actually fall while politicians at the same time boast they are “subsidizing ethanol”. Don’t be fooled.

Long Term Government Commitment:

Incentive systems and subsidization systems set up to encourage a change to biofuels must be long-term. When taxation laws are structurally changed with the aim of preventing Global Warming we must ensure that those laws are also long-term. Biofuel capital works have to be recouped over time.

In the past it has been a common maneuver by government bureaucracies to create assistance and grant systems for the development of non-fossil fuel initiatives. But it is also standard, slight of hand practice to limit the duration of such assistance in manners that effectively nullify their meaningful implementation. Politicians have thus appeared to be concerned about Global Warming while concurrently acting in ways that worsen it. The reality being that they continue to comply with the dictates of the fossil fuel dollars.

Don’t let them continue to get away with it. Look for it in their actions. Be ready to oppose all forms of such oil-inspired political and bureaucratic skulduggery.

Limited Oil Reserve Fiction:

A conviction is quietly promoted that Global Warming will self correct as the world will run out of oil some time in the near future. So why worry? That is what they want us to believe. Maybe in half a century or so we might indeed eventually run out, but that’s not anywhere near soon enough. It can’t happen in time to prevent world climatic havoc. It won’t stop the damage, the deaths, and all the destruction.

There is so much oil out there that there’s currently little enthusiasm for searching out new deposits. In addition, old, supposedly worn out fields often contain several times previously extracted quantities. New techniques can get that oil out.

Everybody must appreciate that reliance on

fossil fuels has to end and not because of any meaningful drop in supply. Not because we might run out of the stuff, but because the limiting factor is the vulnerability of the heat flow and optical characteristics of our atmosphere, and that limit has already been exceeded with expensive and escalating consequences.

Building Third World Economies:

The concept of solving tropical third world countries’ economic woes by having them grow sugar cane and oil palms to produce ethanol and biodiesel for world markets has tremendous promise. We can decide to buy our ethanol and biodiesel from any Third World country that is now a free democracy, or is moving towards being a free democracy. It will make for a safer and more prosperous world for all of us.

The now common African Oil Palm trees, *Elaeis guineensis* are considered the most prolific producers of vegetable oil. The oil admirably suits biodiesel production. They are a tropical plant. The fruit of the oil palm can produce over five tons of oil per hectare. And that’s equivalent to five tons or 5,000 litres of biodiesel per hectare, or over 500 US gallons per acre.

Edible vegetable oil prices vary around US\$0.55 per litre (US\$2.00 per gallon), and sometimes higher. But as human consumption is not an issue, biodiesel-suitable oil can be produced for as low as US\$0.30 per litre.

Glycerol is a fossil carbon free byproduct of biodiesel production and is a versatile raw material in the chemical industry. The two products mean biodiesel can be produced at costs similar to petroleum diesel. Therefore we should actively support a plastic industry based on glycerol. Give them a tax break, or what ever they want to make it happen. Ask them. Let them say what they want or need to economically switch to a planet-protecting raw material.

Biodiesel can become even more viable when oil producing algae farms are guaranteed an assured market long-term. Algae oil production has the potential to lower biodiesel costs dramatically. Unfortunately preventing Global

Warming can't wait. We will simply have to tolerate paying high subsidies to all biodiesel producers pending these hopefully inevitable developments. That way at least gets us the infrastructure in place and Third World countries on their feet and prospering.

INDUSTRIAL ENERGY AND POWER GENERATION

All nations aspire to the type of living standards current in the West, and they will eventually achieve those living standards. They will require a huge supply of energy, just as ours does. That new energy must not come from burning fossil fuels. That is just as important as recognizing that our energy must cease coming from fossil fuels.

We in the West use about the same quantity of fossil fuel to generate our electricity as we use to power our transport systems. We can easily grow all the sugar, grain and vegetable oils we need to power our transport systems. And they are safer and better fuels than those from petroleum. But like petroleum fuels, ethanol and vegetable oils are too expensive for generating industrial electric power. Natural gas produces about the same quantities of greenhouse gasses as oil but is cheaper. Natural gas use is slightly limited by delivery difficulties and considerable dangers.

Basically we have to make the decision: it's nuclear energy or it's coal and gas. To prevent constantly accelerating climatic destabilization it has to be nuclear energy. For large-scale industrial power generation there is absolutely no other choice.

We all have to accept the realities of power generation. Dreamland science won't solve Global Warming. Reality just won't go away.

Conventional Alternative Energy Is Very Limited:

Explain to your friends the limitation on industrial energy production from solar, wind, wave, tidal, hydroelectric, geothermal and the other non-nuclear alternative energy concepts. Point out that all of them in total can only ever constitute a minor role in world industrial energy

production, at least in developed nations. Energy use is expanding a hundred fold faster than alternative energy production. It is probable that low cost solar thermal power generation could be viable in developing countries, especially where electric grid systems are poor or simply don't exist.

Solar Hot Water Heaters Are Great:

In areas where energy is fossil fuel derived, solar hot water systems must become the norm. We must make our legislators legislate to make that happen quickly. Arguments against such laws will undoubtedly germinate in the brains of the fossil fuel PR people. So be aware. Don't be fobbed off with carefully structured systems designed to sound good, but in reality be too hopelessly cumbersome and impractical for general acceptance. We don't want solar hot water systems to be simply competitive. We want fossil fuel based hot water systems to be hopelessly uncompetitive. Legislators, we are telling you: "Do it, make it happen".

Natural Gas Is No Answer:

Natural gas is not the "clean" fuel it's purported to be. In many ways natural gas is more dangerous and more damaging than oil. As a source of carbon dioxide, burning natural gas is only slightly better than burning oil. But because of unavoidable methane losses in transport and storage, natural gas can actually be worse than oil in generating greenhouse gasses. It is promoted as "less polluting". Not so. Certainly it's free of some of oil's more obscure naturally occurring impurities such as sulphur, so acid rain effects are reduced. But that's it. For electricity generation, gas produces about the same quantities of greenhouse gasses as does oil. (Although neither are as bad as coal.)

Don't believe the advertising, natural gas is in no way a safe and benign energy source. This manufactured fiction that natural gas is somehow safe has to be corrected. Natural gas is as bad in both power stations and automobiles as is oil and petrol. It is essential that this be understood and

appreciated by all. The safety and environmental desirability of gas is a marketing gimmick. Make sure people recognize the ploy as just a simply, subtle and astute public relations image manipulation.

Nuclear Energy Must Happen:

There is nothing wrong with nuclear energy, as we saw in Chapter 10: **THE SABOTAGING OF NUCLEAR ENERGY.**

Nuclear energy can replace fossil fuels easily, and thousands of people will live that fossil fuel use would have killed.

We all must appreciate that for years there has been a well planned and deliberate campaign to create an image in people's minds that nuclear energy is very much more dangerous than any other mass energy production systems in existence. That's rubbish. Make yourself aware of the true facts and tell others. Tell them how it happened. Tell them what Sir Fred Hoyle argued and remind people of its relevance in our current world. Point out how the Kremlin supported and funded the antinuclear movement and how this probably explains the extreme left wing bias in these organizations. Talk about the sickening logic of an unholy alliance between the extreme left and big oil, on so many environmental platforms. Argue with those who constantly mouth antinuclear clichés. Don't let them get away with blatant lies and misrepresentations.

Explain that disposing of nuclear waste is far less hazardous than disposing of the hundreds of other industrial waste materials we handle every day. Point out that radioactivity wears out. Explain how if you dump equal quantities of radioactive waste every year at a site the radiation levels at the site will obviously increase, but after fifty years of continuous dumping the levels will reach a peak. From there on radiation levels will be dropping as fast as new materials are added. That means the same site can be used forever, or while there is room available. The site reaches a maximum radiation level and can't get worse. Radiation levels are always in constant decline. It is the nature of nuclear radiation. So eventually the radioactivity

at the dumpsite declines as fast as new radioactive material is added. In total contrast, all non-nuclear dangerous materials simply accumulate endlessly, and stay dangerous forever.

Tell people how safe and sensible it is to exploit subduction zones for all forms of waste disposal, both nuclear and chemical.

The Fiction of Nuclear Accident Dangers:

Many a bad bus crash has killed more than have died from all the world's nuclear accidents. Coal mines are infinitely worse killers than buses – killing people constantly. You can point out that coal mines in China kill 5,000 miners every year.

Tell people the truth about the world's three worst nuclear accidents and tell them how many died. Only Chernobyl would have rated a news story had they not involved nuclear facilities. These are the worst of all the so-called nuclear disasters.

1957, Sellafield – Windscale, in the United Kingdom; no deaths.

1979, Three Mile Island in the United States; no deaths.

1986, Chernobyl, in the former USSR; maximum 48 deaths.

The often-mentioned “estimated thousands of deaths from Chernobyl” is a total fiction. It's more than a fiction; it's a carefully structured lie. The United Nations Scientific Committee on the Effects of Atomic Radiation has been monitoring the accident and its effects continuously since 1986 and confirm the above numbers. Mention the thousands of deaths from petroleum fuels and coal and the almost forgotten Union Carbide chemical accident in 1984 at Bhopal, India. That death toll was 20,000 people. The toxic gas that killed everybody formed from the pesticide and herbicide raw materials held at the plant. Bhopal was worse than 500 Chernobyls and people are still dieing from the Bhopal chemical spill. People forget what they are not deliberately reminded of. Chernobyl is constantly resurrected by the media. Bhopal almost never.

Nuclear Radiation Health Benefits:

Explain that people exposed to radiation up to a hundred times higher than normal background levels are healthier and live longer. They may not believe you, so tell them to check it out. Then they will know the facts and can decide for themselves. Explain that nuclear radiation is like sunshine. Many times more than we now generally receive is good for us, but way too much can kill. Also explain that people exposed to extreme levels can die within weeks, but if they survive the first month or so then complete recovery is nearly certain, and with no aftereffects whatever. The antinuclear lobby either, simply do not have the facts, or they deliberately lie about radiation mortality and dangers. So you tell people the facts.

Many Nuclear Explosions:

Few people are aware that we have exploded two thousand nuclear devices on this planet to date. So remind them. Note that they were detonated in the atmosphere, on the land surface, on remote islands, underground and under the sea. Thirteen were exploded in space at a whole range of distances out from the Earth. Man-made lakes have been produced using nuclear explosions. They are used for fishing and recreation, and they are safe. They are considered as health resorts.

In spite of the horrific images we associate with nuclear explosions, the physical world hasn't changed in any way for the worse because of them. Not one iota. The increase in background radiation over the planet is utterly negligible, yet those detonations were never "cleaned up". Neither was the waste from the explosions stored in glass or concrete, or steel drums, or buried in salt mines, as is mandated for nuclear power station waste.

Nuclear Power Reactors Everywhere:

People must become informed. People must be made aware that there are around 440 operating nuclear power stations generating electricity across the world. If we had just five times as many we could completely stop using fossil fuels to generate our electrical power. It's as simple as

that. People don't know this, so tell them.

There are already thirty-one countries in the world that have operating nuclear power stations. There are about sixty nuclear power stations in France, over a hundred in the US. In Lithuania over 80% of the electricity generated in the country is nuclear. Some of the reactors in the former USSR are of the old Chernobyl design, but now they have the stupidity factors removed and they're OK. All later nuclear power plant designs now, and from anywhere, are extremely safe. So safe that even some near impossible, hypothetical melt-down in one would not be a particularly life threatening accident to anybody. A nuclear power station cannot be turned into a nuclear bomb. Explain this to people. This sort of common sense information has to become more widely recognized. Tell people the facts; explain them. The never ending flood of disinformation fuelled by the fossil fuel brokers has to be countered to stop Global Warming.

Nuclear Reactors In Hospitals:

As an example of nuclear use tell people about the TRIGA isotope and research reactors described in Chapter 10: **THE SABOTAGING OF NUCLEAR ENERGY.**

There are over eighty installed at universities and hospitals all over the US. They are not only safe for use, but are routinely used by hospital staff and university students.

Reactors Deep Underground and Buried:

People should be aware of reactor design options. One system really worth knowing about is the concept for building automatic, self-limiting power reactors deep underground so they could be sealed off and left there indefinitely. It would be perfectly feasible and safe to install such reactors in an unfriendly or politically unstable country to supply the economy with reliable but militarily useless nuclear power.

The Antinuclear Movements:

The whole antinuclear movement is in absolute compliance with the objectives of the oil and fossil

fuel lobby. This may be an incredible coincidence or it may not be, but it is a very real fact of life. Ask your friends to start thinking and stop naïvely believing the propaganda.

The PR organizations heap upon us some imagined guilt of increasing radiation cancer risks to our distant descendants. Don't ever feel guilty. The best and safest thing we can do for our children and grandchildren and all our ongoing descendants is to responsibly embrace the concept of a totally nuclear energy powered society. The future dangers they sell are fabricated fictions. That mankind faces a nuclear waste disposal problem is also a cruel and fabricated fiction. When the relatively minute quantities involved are taken into account, antinuclear waste disposal arguments are seen to be senseless, and all too often childish.

Today, if it so wishes, any country can build a nuclear reactor structured to produce weapons grade materials. And we could be utterly unaware of such action. In the past, that has already happened in at least four countries. Yet having oil available to make weapons grade chemicals should be much more frightening than having uranium available to do the same.

People need to start thinking these things through, so get them thinking. The generation of power by using nuclear energy is essential if we intend to stop Global Warming. Even a nuclear war wouldn't kill as many people as would die from limiting our reaction to Global Warming to a naïve compliance with Kyoto type protocols. See Chapter 10.

BRINGING GREENHOUSE CARBON DIOXIDE LEVELS BACK TO NORMAL WITH SOIL

The Answer Is Increase Soil Fertility:

Explain to people that soil humus and soil organic matter is mainly decomposed plant life and is 58% carbon. Explain that the only source of carbon for life on the planet is the carbon dioxide in the air. All we have to do is turn atmospheric carbon dioxide into humus as cheaply and as

efficiently as possible. We are then recreating soil fertility and there is nothing new or magic in that process. It's been happening naturally for billions of years. We just help the process instead of hindering it. See Chapter 5: **SOIL FORMATION CAN HALT GLOBAL WARMING.**

It is simple and easy to increase the organic matter content of soil and so sequester carbon dioxide from the air. Our world's agricultural land areas are more than ample to return atmospheric carbon dioxide levels to normal. We have to raise the organic matter content of the world's soils we cultivate and manage by 1.6% and the greenhouse problems now destabilizing world climates and weather systems will vanish. That must happen now for very soon Global Warming will be irreversible and uncontrollable. But we can do it. If just the US grain belt was somehow managed throughout the next decade to recreate deep soil with a 20% organic matter content, the carbon dioxide in the atmosphere of the entire world would be returned to a safe pre-industrial era level. And Global Warming would be fixed.

Chemicals Destroy Fertility:

We must all appreciate that the vast majority of agricultural chemicals kill soil biological activity. And that is exactly what we don't want. The majority of rural agricultural fertilizers break down soil humus and turn it into carbon dioxide. That must stop, so we buy farm products that are labelled "organic" (Or Priority One if the term is adopted).

Irresponsibly Restricting Agricultural Land Area:

There is an unpleasant and unsavoury motive behind the concept: Agrochemical companies are convinced that enormous increases in the demand and use of agrochemicals will result from the spread of high-intensive agriculture. It is therefore smart for them to instill and support policies that minimize available agricultural land area. The creation of huge wilderness areas and enormous but mostly uninteresting national parks, and such similar concepts ideally suit their

agenda. For the agrochemical companies and their green supporters the ultimate dream is to have all food and farm produce grown in vast chemical vats. Sadly for the atmosphere, market acceptance of such hydroponically grown food is rapidly becoming established. That trend must stop.

A catchall phrase to promote the agricultural land minimization agenda is the beautifully marketable and convenient concept of labelling anything agricultural as a “threat to biodiversity”. Not so. The catalogued figures show that the actual number of species lost over the last hundred years is almost infinitesimal. The so often claimed thousands of losses is a PR fiction. See Strategy 50. Remind people that the word “biodiversity” was not even in Webster’s Dictionary of the English language prior to 1986. Now it is the chosen religious icon of most green movements and is the banner under which they claim over 90% of the planet as their “sole responsibility”. This craved-after influence must shine as an emblem for the “power trippers” in the biodiversity industries.

When you next see land being confiscated on some green cause pretence, object to it. That would make YOU the one “saving the planet”.

Fixing Salinity and Fixing Soil Erosion:

Most people are utterly unaware of the causes of salinity. Explain how salinity problems result from mono-cropping, excessive use of water, agrochemicals and “turning the soil”. Explain how reversing these practices will rapidly fix salt problems at no cost. See in Chapter 8: **THE END OF SOIL SALINITY.**

Inform your friends that the best and assured defence against soil erosion is to create fertile soil. Point out that planting trees and scrubs has negligible erosion benefits. Even if planting worthless trees did work, one must ask, what ultimately would be the point? Increasing soil fertility, on the other hand makes real sense.

Buy Organic If Available:

Organic farm produce grows best in humus-rich fertile soil so, apart from minimizing agrochemical use, buying organic produce forces the farmer

into developing the fertility of his soil. Some plants won’t even grow in other than humus-rich soil. Increasing soil fertility thus becomes more profitable for farmers. Our job is simply to be a health conscious and responsible customer.

A “Priority One” Logo:

The “organic” label is excellent so always choose a product so labelled. However, “organic” covers too narrow a band. There are a whole range of products and processes where “organic” is not applicable. Without a label or logo it is more much difficult for us to manipulate the market place in the way needed to halt Global Warming. For goods and services that suit our purpose but where “organic” can’t be used, I suggest we use “Priority One” (**P1** or **P.one**) as our logo. Let’s try it.

Various terms specific to Global Warming may develop over time but for now adopting the logo “Priority One” would get things rolling.

When we select a product, a process or a service, that selection should be predicated to the prevention of Global Warming and should be labelled “Priority One”. On aluminium and other materials that require huge electricity inputs whose power source is non-fossil, they too should carry a “Priority One” logo. Aluminium saucepans and similar items made from these materials should also carry the logo. Motor vehicles that run on ethanol. Any of the range of hybrid vehicles now coming online. Solar hot water systems. Nuclear power stations and high energy users that use their power, produce grown in soil where fertility levels are rising. All are “Priority One” in the prevention of Global Warming and climate change.

If you yourself produce goods or services that sequester carbon dioxide, or prevent its original formation for one reason or another, your product should be labelled “Priority One”. Be proud, do it now, advertise your reasons and confidently believe that responsible people will make responsible selections and buy your product, your process or your service.

A simple certification procedure will have to eventually come into being. Maybe you are in a club or organization that could help create a

sensible and encouraging certification process? If so the whole world needs your help. Contact us through Keyline Publishing Co at Surfers Paradise, Australia.

Chemicals Non-Deductible:

Ensure that your tax dollars don't fund chemically dependent agricultural practices. So contact your political representative and insist that the use of agrochemicals that destroy soil fertility must no longer be a tax deductible item. Let's get those taxation laws amended now.

No Farm Subsidies Based on Land Area:

This is surprisingly important. Insist that subsidies are to be paid on quantity of farm produce actually produced, and subsidies must never again be pegged to land areas. Explain why and how land area subsidies encourage excessive use of chemicals. To ensure that such changes happen quickly, have legislators modify subsidy systems so farmers are not only not penalized, but in fact do better by adopting fertility enhancing practices. After all, our food will be tastier and more nutritious. Also point out how easily such a change can be made. If you personally know somebody with any influence whatever in government, then do some lobbying. See Chapter 6.

Save a Tree Fictions:

Explain to your friends, explain to whoever will listen, that soil enrichment can entrap carbon dioxide quicker and more efficiently and at vastly less expense than by growing useless trees – useful trees maybe. Point out that only by harvesting useful trees containing useful wood are trees of any use in combating climate change. If the wood in a forest is not constantly harvested then a forest system is totally worthless in combating Global Warming. Explain why.

Forests Don't Produce Usable Oxygen:

Explain how both a mature tree and an established forest breathes out as much carbon dioxide at night as it breathes in carbon dioxide

during the day. It will also get worse, for with Global Warming temperature rises, forests are drying out and starting to burn. Getting the timber out before they burn is common sense environmentalism.

Wood Is beautiful:

By using wood we create a carbon sink. We must champion the harvesting and use of wood from wherever it comes. If wood will do the job, then use it every time. Let people know you like wood and why they should too.

Clearing Scrub and Forests:

Clearing and enriching the soil with grass and crop production is a nett carbon dioxide entrapment process. Actively preventing the clearing of scrubland and so preventing the absorption of carbon dioxide into soil shows a cynical, or at best naïve, disregard for the planet's total environment. Recognize that the true motive, the behind the scenes motive for preventing land clearing to create grazing and general agricultural land is to encourage more intensive chemical agriculture. And that is exactly what we don't want.

Fertilize With Sewage:

Remind people that human excreta, like any other animal excreta is an excellent fertilizer. Point out that except for our Western based chemical agricultural systems, human waste has been used in the growing of food in every society and every civilization that has ever existed on the planet. Any possible impurities such as the mythical monster known as "heavy metals" or even pathogens are neutralized in fertile soil. It is simply the nature of fertile soil and the nature of the animals and people that evolved with it. Pathogens do not like fertile soil. They soon die. They survive best in stagnant infertile environments such as wetlands and polluted ponds. Raw sewage, no matter how contaminated with pathogens, will self sterilize as soil fertility levels climb. With the extra thousands of tons of humus, heavy metals will safely chelate onto the abundant humic acid molecules in the soil, just like salt.

If we aren't going to use sewage to fertilize edible crops then it should be used for growing non-edible crops, trees for timber, cotton for clothing, vegetable oils for biodiesel and especially sugar cane for ethanol production.

But let's stop wasting it. In a modern sewage plant we turn this excellent fertilizer into carbon dioxide and discharge it into the air. Anything left we bury deep, or we burn. Against the inevitable opposition of the agrochemical industries, we must all support propositions that utilize any use of sewage that stops its rapid conversion to atmospheric carbon dioxide.

COMBATING MYTHS AND MANIPULATED ENVIRONMENTALISM

Manipulated Biodiversity Causes:

Allow me to repeat and reiterate: Global Warming, with its consequential destabilization of world climates is by far the biggest threat to biodiversity on the planet. Nothing else is remotely comparable. Too often, organizations that profess to be protecting some facet of biodiversity are in fact forcing more Global Warming, forcing more cancerous climate change and guaranteeing less biodiversity.

They are indirectly, and hopefully inadvertently, supporting increased sales of oil, coal and gas. Too often that's been the way things have been systematically contrived.

If a "cause" results in more fossil fuel use, more intensive or more agrochemical based agriculture, or the expansion of oil or fossil carbon dependent products, think of the bottom line. Does it in any way contribute to fixing the atmosphere? If not, don't support it and don't trust it. See Strategy 50.

Manufacturing and Reinventing Wilderness:

Remind your friends that modern man first appeared and began colonizing the whole planet around the middle of the last ice age. Over the tens of thousands of years of that colonizing process, man massively modified the environment and the ecology of every continent on Earth. It was mostly

done with fire. Our early ancestors were not particularly altruistic. To hunt down a meal they would happily burn a million acres. Some burning simply changed things to be more suitable for our species. Some burning made it worse.

It must be appreciated by all, that outside of the world's deserts of sand or ice, no pre-human wilderness exists anywhere on this planet. Protecting wilderness areas is fiction. See Strategy 50: **INVENT A BIODIVERSITY CRISIS TO STOP TIMBER HARVESTING, TO SUPPORT WILDERNESS CLAIMS AND TO LIMIT AGRICULTURAL LAND.**

Environmental Protection Agencies Don't:

EPAs are supposedly set up to protect the environment. But their developed aim has become to acquire power, acquire undue influence and to protect themselves and their money supply. No EPA anywhere, in any country seems seriously concerned with Global Warming, and Global Warming is disrupting the environment of the whole planet. The oil industry is behind the scenes of too many green movements and EPAs. For them it pays to be.

With state and federal EPAs, it is now time for us to query: what part of our environment do their officers so selectively try to protect, and for whom? EPA officers, in the pursuit of usually illogical and unworthy aims, are granted excessive and unjustifiable power over ordinary citizens. And when you pause and observe, it becomes obvious that in too many cases their causes seem to be excessively in line with the dictates of the fossil fuel and petrochemical industries. EPAs impose restrictions that are all too often quite irrational. Global Warming is the only extremely serious environmental issue facing life on this planet, yet it is rarely of interest to an Environmental Protection Agency anywhere. EPAs simply plug for huge budgets for never-ending, ongoing research into pointlessly ever-expanding wilderness grabs.

Unfortunately an EPA is too often the source of environmental advice to a government. The reality is, while most of their officers live in small private worlds of their own, they nevertheless

wield immense bureaucratic power in pursuit of their all too irrelevant issues.

EPAs are just like most agricultural departments and have to be taken with the proverbial grain of salt. Both are excessively influenced by the tentacles of the fossil carbon lobbies. For example, the US EPA lists compressed natural gas (CNG), liquid petroleum gas (LPG), methane and propane as alternative fuels. With tiny exceptions, every one is derived from some fossil fuel deposit somewhere. Every one produces, at the very least, twice its own weight in greenhouse gasses. Americans should therefore ask, whose environment is their EPA protecting? Australia is the same. Australia, for example lists hydrogen gas as an important fuel. It might just as well list Eveready batteries.

Nevertheless, there are people within these government organizations with clearer vision that see the real picture. Let's make their voices heard. Have them run our Environmental Protection Agencies but with the restoration of climate stability and the prevention of Global Warming as their prime objective. Even then we citizens will still need to monitor them to prevent their capture again by the fossil fuel lobby and their political hacks.

Australian Inland Rivers:

Inland rivers in Australia illustrate how EPAs go wrong. Those rivers don't carry huge quantities of water except in flood times. There is a well rehearsed movement to prevent the construction of farm dams and the use of the stored water for irrigation and soil development. The proclaimed motive is to "protect" these rivers, seemingly by keeping as much water as possible flowing out to sea. So ask, "Protect them from what?" There is only one utterly logical motive for this suddenly inspired cause of protecting Australia's inland rivers. That is to flush agrochemical-loaded farm runoff water out to sea. By world standards Australian rivers are more like creeks. Agrochemicals are building up in all of them and the build-up will eventually become obvious and ultimately hurt agrochemical sales. So specialized and well tutored green

movements demand: keep the rivers flowing. The truth is, their aim is to keep the rivers flushing! We have to make people recognize this "cause" is the worst form of cynically distorted and manipulated environmentalism imaginable. It is not to protect the rivers. It is to protect agrochemical sales. See **THE GREAT AUSTRALIAN RIVER SCAM** in Strategy 2.

Energy Conservation Fictions:

It sounds good, but the reality is that turning off lights, turning down the heat, warming up the air conditioner, etc. etc. etc. only works for a short time. It ultimately becomes another chore, which, in general, we eventually ignore. Such things as improved insulation in buildings is a more sensible, more permanent approach than endless, tiresome personal self-regulation.

Of course only where the energy is fossil fuel derived is energy conservation actually relevant. If energy is not derived from fossil fuels then energy conservation becomes simply a cost consideration. And the truth is, the world is not in any way short of non-fossil fuel derived energy, and never will be.

Ultimately the most effective way of minimizing fossil fuel derived energy is by pricing such energy in tune with its grim cost reality. Yet incongruously, in almost all countries fossil fuel, the single most virulent producer of greenhouse gasses, is subsidized by the state by using taxes collected from its citizens. That's worse than blind madness, for it's carefully planned and deliberately structure madness. We must stop insane subsidies of that nature and replace them with punitive carbon taxes and fossil fuel excises. The aim must be to consistently and systematically tax fossil fuels out of existence. See Strategy 19.

The Kyoto Protocol And Similar Myths:

The Kyoto Protocol is another fairy story. Ratify it or don't ratify it, it means nothing. The Kyoto Protocol was, or might just as well have been written by the oil and gas industries. For them it was perfect. It has now come into being (February 2005) and is being publicized as a great

environmental coup. People are encouraged to feel warm and fuzzy, but oil and gas will continue to flow in ever increasing quantities, and in more and more countries. For the oil producers it is perfect. For example: Russia is now a major supplier of the world's oil needs. Russia signed up and made that idiotic protocol legal and binding. In doing so Russia absolutely guaranteed itself an ever expanding market for its huge oil reserves. See Strategy 1.

Bicycles Are Unrealistic:

Bicycles are publicized and heavily promoted by some as the green answer to transport. That's rubbish. The car and oil companies support the concept because it makes them look responsible, yet both know bicycles can never be a serious threat to either. Like it or not, modern Western cities have been built to suit the automobile. In them, automobiles will always be preferred. In cities where a bicycle works best, a motorbike or motor scooter works better. My city has most of its roads plastered with paint stripes to create "dedicated bikeways". They cause massive traffic problems but haven't increased the number of bicycles in use. The massive sprawl of dedicated bikeways remain empty.

There are a few situations where dedicated bikeways are certainly worthwhile, for instance near schools when the school day begins and finishes. But these are exceptions. Generally the cost of the delays and the irritation to the travelling public of these incredibly expensive public relations extravagances is enormous. Have the courage to criticize such hypocrisy. Traffic idling for hours in jams and snarls is a gas-guzzling climate change monster.

Recycling Has Varied Worthy:

While recycling industrial materials is obviously a sensible option, in general it has negligible impact on total atmospheric greenhouse gas levels. Some recycling processes can actually be a nett producer of greenhouse gasses. (Recycling non-carbon based materials, such as metals, is a wholly separate and often a very worthwhile process.)

Paper is one of our major waste products. It should be either recycled back as reconstituted paper, or simply burnt as fuel. Either way carbon is not added to the biosphere, so Global Warming effects are minimal. Burning paper to avoid burning a fossil carbon fuel is probably the best paper recycling scenario. Alternatively, waste paper can be mulched and mixed in topsoil, but generally there is just too much waste paper being produced for this option to make much sense. The worst option is to bury the paper in land fills. Paper in land fills decomposes anaerobically into methane, as do nearly all biologically based materials starved of oxygen. The methane gas seeps into the air, and methane is a greenhouse gas twenty times worse than carbon dioxide.

Often recycling is undertaken to prevent excessive accumulation of toxic chemicals and metals. This too is obviously a sensible option but has a negligible Global Warming impact. Recycling benefits are possibly over emphasized in relation to Global Warming. This should be watched in education curriculums where Global Warming is often systematically de-emphasized.

A more sensible and widely supported concept first recognizes that about three-quarters of household garbage is paper and biological materials, food and lawn clippings etc. It then recognizes that these materials can all be happily digested by earthworms. An earthworm can easily eat its own weight every two days. What's left is simply screened off and consists mainly of now fairly clean glass, plastic and metal. All are easily separated for recycling. The worm casts are fabulously rich natural fertilizer. They can be spread on farmland in absolutely any quantity. Chemical fertilizer companies hate the concept and hate any publicity it might receive. It's called "vermicomposting". We should embrace and subsidize it. Vermicomposting is a very significant carbon sequestration and fertility enhancing process and could easily handle the huge volumes of garbage produced by the largest of cities. We should make vermicomposting of city waste become the standard treatment process.

Natural Fibres Feel Good:

It makes sense to use natural fibres if a choice is available. However, woven plastic fibres are not produced in sufficient quantity to seriously affect Global Warming. Plastic materials are now produced in bewildering varieties and for an incredible range of applications. The plastics industries are not the immense producers of greenhouse gasses as is often suggested. Campaigns to ban carry bags at supermarkets, successful or otherwise, will have negligible effects on Global Warming. Driving to the supermarket uses gallons of petrol. A carry bag might be made from a teaspoon of oil, yet carry bags are hammered as some big environmental issue. Always consider the oil industries' sales assessment of relative importance when you do your own assessing. A can of oil can make either a can of petrol or a can of plastics. An awful lot of useful goods can be made from one can full of raw plastic, whereas the petrol is burnt in a few minutes.

Re-Thinking Asbestos:

What is the true story on asbestos? We all "know" the horror story, and we are all ingrained with fear of its use anywhere, any time. But is there more to the story? Could there be ulterior motives and well structured fiction involved? Is it possible that the asbestos story is not quite that simple? Did asbestos get the antinuclear energy treatment?

The currently mined type of asbestos is as safe as any of its substitutes. It is also much stronger and more reliable. The switch from better quality asbestos cement building materials to plastic reinforced cement products might just have been a petrochemical industry master stroke. The money involved is massive. Asbestos fibre substitutes in every fibre cement sheet made today use large quantities of fossil fuels in their production. Asbestos uses none. Asbestos comes out of the ground ready made.

Switching from using virtually heat proof asbestos in brake pads in the family car to far less safe alternatives should never have been permitted. People should be made aware of

who benefits from the demise of asbestos. It's a lesson all who understand the dangers of Global Warming should think about. Like many things in the environmental and green crusades, we need to keep an open mind on asbestos. See Strategy 41: **DESTROYING ASBESTOS AND HEMP AND THE NATURAL FIBRE INDUSTRIES.**

Carbon Sequestration Fictions:

To continue to dig up and sell oil, gas and coal, it is smart policy to have people think it likely that the carbon dioxide produced can be simultaneously pumped back into the ground. The concept is utterly ridiculous. The costs would be astronomical and the storage risks would make storing nuclear waste look like a weekend picnic. Also the concept of pumping enormous quantities of carbon dioxide down into deep oceans has some terrifying possible consequences. Absolutely huge amounts of our tax money is being wasted on these oil/coal/gas inspired PR extravaganzas.

To illustrate how ludicrous the concept is of the mechanical sequestration of carbon dioxide, point out to people that a power station sufficient to supply a modern city of one million people requires two long train loads of coal each week to fuel it. Let's presume it is somehow possible to collect, and freeze into dry ice, all the carbon dioxide produced at the power station. Our power station then has to ship back out the back door those same long train loads, now somehow filled with dry ice, and do it every single day. Not just twice a week. Then we point out that the dry ice has to be dumped into some absolutely safe, air tight underground hole three times as big as the mine tunnel or open cut that the original coal came from. It's crazy.

Immediately, electricity from burning coal would be a dozen times more expensive. Peanut butter would be a more logical fuel, and it's a biofuel. Coal and sequestration would be more expensive than even the dearest nuclear energy, and that's with nuclear energy waste disposal costs assessed at the most hopelessly exaggerated cost imaginable.

Similarly, an oil well wouldn't accept back even

half the carbon dioxide that burning the extracted oil would produce. Petrol would suddenly cost three times as much as ethanol. The futility of carbon sequestration is considered in detail in Strategy 21.

It is already appreciated, by those that seriously do the sums, that alternative fuel costs are far lower than the cost of burning fossil fuels and then somehow sequestering the resulting carbon dioxide. And that's by using the very best of the hypothetical sequestration concepts bandied around. Sequestration arguments can confuse because on face value the basic arguments sound logical. The problem is just that the practicality and fundamental economics are insane. Yet the US and Australia are both allocating incredible sums to research on carbon dioxide sequestration. It will get nowhere. It will dangerously placate fears of Global Warming for those unaware of the futility of the exercise. Carbon sequestration is being made the carrot on a stick to a blinkered donkey. Let's not be the donkeys; throw away the blinkers.

Blowout in Insurance Costs:

We must tell people of the rapidly escalating costs of weather related insurance. Insurance bodies are telling us that weather related costs are rising at 10% per year. Arithmetic therefore shows they will double every seven and a half years. It seems many of us will live to see climate change related damage costs eventually exceed world GDP, as has been predicted. Today, already many homes and buildings are becoming uninsurable. In a free enterprise system, capital assets are an important means of securing borrowings needed to generate wealth. An uninsurable asset thus becomes a financial millstone around one's neck. In consequence the gross national wealth is decreased. As always, everybody pays, so let's all draw the line. Global Warming has to stop now.

Hammer Talkback Radio:

Get the message across on how simple it is to prevent Global Warming. Whenever you hear pseudo-environmental arguments being

expounded, phone in. Don't let them get away with environmental fictions structured to sell fossil fuels and petrochemicals.

Counter Blatant TV Bias:

When you see TV productions that are subtly or blatantly biased against alternative energy such as "wind turbines might kill endangered birds", phone in, write in, complain. Remember the quote? Let's try being the mosquito!

Letters To The Editor:

Write in. This can help, though letters are always vetted and all too often to the advantage of the fossil fuel advertisers. However keep trying. Good ones will get through. Always write in when you see environmental issues being pushed that either sell oil or hinder and delay alternative energy systems from implementation. Don't let them get away with it. Continue to demonstrate you want practical action on Global Warming, not platitudes.

WE SHOULD KEEP SUBSTANTIAL OIL RESERVES

We can't let running out of oil ever happen even if it sounds like a good thing. For future generations it is imperative that we keep massive reserves available. At some time, some unforetold astronomical event, or some unsuspected geological occurrence might tweak the atmosphere towards generating a freakish world-cold. It has happened at least a couple of times before in our Earth's long history; our planet completely froze over. It's called the "Snowball Earth" phenomenon. The Snowball Earth effect is much more sensational than a simple ice age.

During a Snowball Earth cycle information suggests the world freezes over in maybe a thousand years. Average world temperatures then plummet to -50°C and Earth's temperatures are as cold as those on Mars at midnight. The extreme cold apparently lasts a few million years. Ultimately ongoing volcanic activity means carbon dioxide levels rise unchecked by biological sequestration. A critical point is reached and the ice starts a rapid

melt. The Earth thaws out in as little as hundred years and world temperatures rapidly soar from an average -50°C to an average of +50°C. (-60°F to +120°F). See Chapter 1.

Whenever and for whatever reason, if something like global freezing ever got started we now know how to stop it. We could deliberately generate controlled Global Warming. We already know how to, and we know it works, for that's what we are doing right now and have been doing for the last seven decades, without realizing the heating consequences.

So humans must have readily available fossil fuels to switch to and to use for however many decades it takes to prevent some such deadly creeping catastrophic ice age from happening. We must keep the oil we have left. Fossil fuel reserves may be humanity's only life raft if something like that ever got started.

WHAT RESEARCH AND DEVELOPMENT SHOULD WE FUND?

We are spending vast sums on research about Global Warming. Politically this looks good. The money usually goes to a variety of universities where professors and students dream up research projects for their doctorate degrees. Fixing Global Warming for them is not the issue. For them, writing reports, studying statistics and dreaming up projects that qualify for even more funding, are the important things at issue. That's how universities work. We don't need further research to prevent Global Warming. We simply need to stop it, and to stop it what we need is personal determination and political will.

If they are going to spend our money on Global Warming research then let's spell out what could be, and what couldn't be useful.

In this we are only considering what governments have collected from us in taxes and how any research money should be spent to stop Global Warming. In general, private or industrial funded research is their own business as it's their own money. However private research that contributes to the prevention of Global Warming,

should be assisted by our tax money as such funding is usually less wasteful than government organizations.

Research and development is fine, but no new R&D breakthroughs are necessary to halt and correct Global Warming. The claim that more R&D is essential is an oil PR delaying tactic.

In the following, Global Warming research and development has been given a **Yes** or **No**; we spend money on it or we don't. The requirement is that we do not squander our research dollars on pointless and irrelevant concepts.

RESEARCH AND DEVELOPMENT FOR THE TRANSPORT SECTOR

Automotive Power Systems? No.

Automobile companies, aircraft companies and ship builders handle engine design better.

Ethanol? Yes.

We would like research undertaken to develop biological processes for turning cellulose type material (like grass) into ethanol fuel. Producing ethanol automotive fuel from the fermentation of sugars and starches works well and will do us for now, but other processes that might ultimately prove better or cheaper, or use more easily grown raw materials should be researched, investigated and developed. Ethanol made by the acid hydrolysis of cellulose matter with bacterial fermentation, is one example.

Biodiesel? Yes.

Biodiesel is manufactured from ethanol and vegetable oil. A better oil producing plant, either a new type or an existing plant selectively bred for higher oil yields would be good. Plants could probably be genetically modified for massive oil production. Remember however that the oil public relations people will try to hinder such research and development. They might enlist and fund the anti-GM groups if plants showed promise.

Some types of algae are efficient at producing suitable oil. These should be studied and developed and promoted. The oil need not be palatable. It is

not for eating. It's simply a biological solar energy collecting process that we wish to improve.

Biodiesel For Jet Turbines? Yes.

We need official research done quickly to ensure rapid approval and authorization to have biodiesel or biodiesel blends authorized for commercial use. Oil companies won't like this and aeroplane engine makers are in no hurry, so in this the use of government research agencies is therefore necessary. It will also totally confirm the safety and reliability of biodiesel fuels in ground based gas turbines. (The term "gas" refers to burnt gasses spinning the turbines, and not the fuel itself. Steam turbines, by comparison, are driven by steam.)

Hydrogen Storage? Yes.

Hydrogen gas is a good energy holding material. Hydrogen is not an energy source. Hydrogen has to be manufactured by using an energy source. One problem with hydrogen is that there is no way yet discovered to economically contain the substance. It either has to be stored at extremely low cryogenic temperatures, or has to be stored at extremely high pressures in heavy metal bottles – like the familiar oxygen bottles used with oxy-acetylene torches. The problem is that such bottles can hold only relatively tiny quantities of gas. Also, over time hydrogen gas will leak out through the microscopic pathways within the actual metal. A viable, practical, inexpensive and safe system for holding hydrogen gas has yet to be invented. It is worth spending money on dreaming up and producing such a system, but it is almost certainly a long way off.

Hydrogen Production? No.

A bottle of hydrogen is in essence a car battery or torch battery. The chemical energy within the hydrogen gets used up and the battery has to be recharged. Hydrogen gas has to be manufactured and the manufacturing process consumes more energy than you can get back out. If hydrogen gas was produced from electricity from a nuclear power station (or any power station for that matter) its base energy cost, with no production

charges, would be the equivalent of oil at over \$100 a barrel. Hydrogen would be three, four or more times the price of ethanol or biodiesel.

However, practical hydrogen storage is a problem worth researching by government. More efficient production of hydrogen is not. That would be no more than a nicety. Industry can handle such problems easily.

Fuel Cells? No.

Industry can and is handling their development. They will be available for motor transport if and when hydrogen becomes safe, practical and economical to store and use. It must be understood that despite all the orchestrated hype and all the publicity, practical, efficient, high output and vaguely reliable fuel cells, that could run a family car simply don't exist and never have. Fuel cells are like the myth of the perpetual motion machines and like them have been around for a long time. Remind people that fuel cells are not only not new, but have been around already for seventy years. See in Chapter 10: Section 16: **FUEL CELLS AND THE HYDROGEN ECONOMY CONCEPT.**

Liquid Fuel From Coal or Gas? No.

This is a total and absolute waste. It is designed to consume research dollars that might be spent on more important non-fossil fuel concepts. If such fuels were ever produced such an energy would be far worse a greenhouse gas producer than even the worst and dirtiest coal fired power station now existing.

RESEARCH AND DEVELOPMENT FOR THE POWER GENERATION SECTOR

Hot Fusion? No.

As a consumer of research funding, hot fusion concepts are a bottomless pit constantly gobbling billions. In addition, and contrary to what is advertised, hot fusion would produce nuclear and chemical waste much the same as our current nuclear fission energy systems. (But also, like current nuclear systems, the waste would not be

a serious problem.) So despite all the inferred claims, appreciate and remember that hot fusion is not a magical waste-free process. The antinuclear, anti-proliferation enthusiasts should pause for a second and try to imagine the consequences of some new, cheap, incredibly deadly but compact hydrogen bomb concept being developed as a result of fusion energy research.

For somebody in the fossil fuel industry, hot fusion is absolutely and undoubtedly the safest place for governments to waste alternative energy research money, and at the same time still have their government looking responsible.

Cold Fusion? Yes.

Cold fusion and the latest possibility, sonofusion, might be long term gambles and possibly of dubious merit, but if some cold fusion process could be made to work, it would be the greatest energy discovery ever. The money needed to fund cold fusion research is minuscule by any other nuclear energy comparison so we should let cold fusion researchers have their heads. Success would be like a monster lottery win.

Cold fusion must really scare the fossil fuel conglomerates. So cold fusion, if ever mentioned, seems always to be consistently ridiculed in the media.

Totally Safe, Utterly Rogue Proof, Politically Correct Nuclear Reactors? Yes.

Sadly this is probably a necessary public relations exercise to hopefully satisfy the extreme antinuclear proponents. It does however fill a need where totalitarian regimes demand a right to use nuclear power simply as a cover for weapons development. We already have simple, robust designs that have stood the test of time. This research would be to merely provide designs for extreme situations and also uncompromising critics.

It is not at all difficult to build a totally safe, completely self-regulating, totally automatic nuclear reactor. A reactor built so that even if it broke down it could simply be abandoned and left where it was; a reactor that would be utterly useless to nuclear weapons-minded rogue

governments or terrorists. A nuclear reactor that would never be worth digging up or maybe built so that it's too risky to try. Something that would be useless to anybody, even if they tried. Inaccessible nuclear reactors, buried a thousand feet or more underground could power any first world, second world or third world city and we need never worry if in the future some rogue governments or gangsters took the place over.

We should get reactors like that onto the market, post-haste. My government and your government should place orders for some now. We don't want manipulated delays. We want them coming off production lines ASAP.

Heat and Energy Storage? Yes.

This is an important problem to be solved in our energy future. It needs a lot of lateral thinking and clever innovation. The costs of wind energy and solar energy (both photovoltaic and solar thermal) will continue to gradually drop, but probably not dramatically. Neither will they ever be much less than twice the cost of efficient nuclear power systems. Photovoltaics will continue to be impractical as a high energy source for many years, possibly for ever. Wind and solar thermal have a big application in developing countries, especially those lacking an efficient and comprehensive grid system.

The problem is storing power to cover breaks in supply. The sun goes down or the wind stops. Wind energy can only be stored as electricity or pumped elevated water. Solar thermal energy can use both these and also stored heat. But neither is really good enough to power well developed nations. The development of practical and economical systems for energy storage is desirable to give a broader spread of energy delivery and allow for inevitable demand fluctuations for such alternative energy systems. For the millions in developing countries, solving energy storage problems will ultimately be essential for twenty-four-hour delivery.

The Hydrogen Economy Fiction? No.

The hydrogen economy is a money hungry fairyland. The whole concept is a manufactured

myth and has to be recognized as such. Hydrogen fusion and hydrogen fuel cells are grouped together as an energy system panacea. It's a piece of PR sleight of hand, for without a reasonable understanding of both the physics and the economics, both concepts are confusing and tricky to assess. It's a house of cards structure, designed to give a consoling promise of some hypothetical dream solution to both Global Warming and world energy supply. It's an irrational dream. Safe and viable hydrogen fusion is a marketing fiction supported only by the fossil fuel lobby and the selected academics happily playing forever with the incredibly expensive toys we buy them.

Also having hydrogen gas promoted as the safe motor fuel for the future is in effect the same as arguing that batteries are the energy for the future. The mythical hydrogen economy dream is based on fusion energy and fuel cells. Today, and at least for any immediate future, both are PR fictions.

Carbon Dioxide Sequestration? No.

Harry Potter science is closer to reality than carbon dioxide sequestration into storage chambers or hypothetical geological structures. Such concepts are just feel-good PR creations. Wasting vast sums of money on such research must stop now. Let's be logical. Carbon dioxide disposal is an integral part of the cost of using fossil fuels so the fossil fuel industries themselves should finance any such experiments. That's even in the unlikely event that they seriously believe it to be viable.

Subduction Zones For Nuclear Waste? Yes.

Subduction zones subduct. They draw in or suck in whatever falls into them. Anything dropped in will subduct to effectively vanish forever. The only research really of interest is which zone might be more effective or more convenient in subducting the waste. By comparison with almost any human waste issue, nuclear waste disposal is a very tiny problem and huge subduction trenches occur all over the world solve it. Almost all would be excellent nuclear waste disposal sites.

As all will be targeted by the antinuclear

movement, so the better ones might as well be researched to forestall theosophical and other arguments. (But not as a delaying tactic.)

Is it safe? Utterly. Only in tens of million of years is it even theoretically possible for the waste to re-emerge in the Earth's upper mantle. It has then to get up through the mantle to the actual surface. Naturally, after a few million years the waste is not only no longer radioactive, but being semi-liquid for millions of years is mixed in the billions of tons of surrounding molten magmatic soup.

Non-Subduction Nuclear Waste Disposal Research? Yes.

It may be more convenient and less expensive to dispose of nuclear waste nearer home. Such research will also demonstrate how easy and safe are the many varieties of nuclear waste disposal systems already available. It might even convince the skeptics that nuclear waste disposal is in reality, not a problem.

The supposition that waste buried in deep holes might get into ground water and travel to distant places while it is still radioactive to any hazardous degree is nonsense. Even in sand, ground water moves sideways at surprisingly slow rates. In most other geological materials, speeds are in metres per thousand years. Research is necessary for selecting sites where ground water movement is negligible to the degree where even remote risks become obtuse hypotheticals.

A SUMMATION OF ENERGY AND AGRICULTURAL COSTS, CONSEQUENCES BENEFITS AND BONUSES

Anthropogenic greenhouse gasses in the main come from three things: soil deterioration, power generation, and transport vehicles. The costs here considered are simply the short term, accounting style costs. It must be appreciated that the real costs of not rapidly moving away from fossil carbon fuels and products and chemically based agriculture will mount rapidly, until catastrophic climate changes become unstoppable at any price.

AGRICULTURE

Increasing the fertility of soil reverses the discharge process and so removes carbon dioxide from the atmosphere. Growing agricultural produce by concurrently enhancing soil fertility is no more expensive than spending sums on agrochemicals that destroy soil fertility. So the agricultural changes and costs necessary to stop and correct Global Warming are minor.

We must consciously discount the lobbying and the politics that infers otherwise, and we must stop the insidious educational bias that teaches our children such falsehoods.

We must fully appreciate that the fertility of our soils can easily be re-established to at least their former levels, it can be done quickly and there are wonderful bonuses and benefits.

1 Removing the existing excess carbon dioxide from the atmosphere and ending its input from soil fertility decline is the big bonus. In so doing we are returning our planet and our weather to normal.

2 There will be a profound and wonderful change in the nature of our food. It will taste better. It will be more nutritious. It will make us all healthier and give us all a longer life.

3 The salinity problems we have inadvertently created all round the world, will be solved and the damaged land returned to healthy productivity.

POWER GENERATION

We can eliminate all gas, coal and oil power generation by simply building, over the next twenty years, five times as many nuclear power stations as we now have on the planet. Many would be no more than replacing old worn out coal units that fall due for replacement. The rest are new power stations that will be required anyway.

These new power stations would effectively end carbon dioxide and related greenhouse gasses produced by electric power generation from ever again distorting our atmosphere.

Only because fossil fuel systems are permitted free-to-air disposal of their main waste products, on average, mining, power generation and waste

disposal costs for nuclear energy are about the same as for fossil fuel systems. Total extra cost of the change is therefore negligible.

4 The big bonus for power systems is that we eliminate the first half of all anthropogenic greenhouse gasses entering the atmosphere.

5 We eliminate mercury and all the other chemicals contained in coal from the food chain. Ocean fish become safe to eat again. We also end acid rain and all its nasty consequences.

TRANSPORT.

Ethanol replaces gasoline/petrol: Presuming world oil prices at around \$40 a barrel, ethanol will wholesale about five to ten cents a litre more than petrol on an equal energy basis. Much above \$45/€45 a barrel and ethanol becomes cheaper.

Biodiesel replaces diesel: Biodiesel's wholesale price will partially depend on utilizing the glycerol by-product. Initially biodiesel should wholesale about the same as petroleum diesel, again presuming oil at around \$45 a barrel. Biodiesel could increase in price a little but only if glycerol demand can't keep ahead of the increased supply. Crude palm oil typically wholesales for around US\$275 to US\$325 per tonne. That's about \$US0.27 per litre. That would make biodiesel wholesale at around \$US0.35 per litre.

Switching to straight ethanol and biodiesel would add, at most, between five and fifteen cents US more per litre, or between eighteen and fifty-six cents per US gallon, all taxes omitted. This is again based on a \$40 a barrel oil price. At anything much over about \$45 a barrel, both biofuels start to become cheaper than petroleum fuels.

6 We eliminate the other half of anthropogenic greenhouse gasses entering the atmosphere.

7 We create a huge farming and fuel industry for third world tropical countries. The oil rich countries have had an income bonanza for years and should by now be industrially healthy and self-sufficient. It's now somebody else's turn.

The wealth of the fossil carbon industries insures that vast sums of money are always allocated, and immense social and political leverage is always applied to fashion public opinion in their favour. Money is used to influence federal and state legislators to achieve these aims.

The fossil carbon industries and the agrochemical industries are in the business of selling their products. Their actions are therefore frighteningly understandable. Whether their advertising campaigns and lobbying activities, and whether their effects on both legislators and the general public is conspiratorial or simply, for them, fortuitous randomness can be debated. The end result however is exactly the same. That end result is increasing Global Warming. It is ever worsening world weather with escalating violence and instability. Let's get our priorities right, these things must now stop.

If enough of us do just some of things advocated in this book, if enough of us convince others to do the same, we will be on a new road, a new pathway, a highway to the prevention of climate destabilization and Global Warming. At the end of the journey we will have recreated a more stable and much safer and more friendly Earth.

So hopefully now this is not THE END, it is:

THE BEGINNING