

Clearing the Smog of Beijing with “Coal by Wire.”

*A statement by Viv Forbes, Chairman of the Carbon Sense Coalition.
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As the TV turns nightly to Beijing, we can expect chilling pictures and doomsday comments about the “Asian Pollution” and the “Beijing Smog”. This will induce media and political scaremongers to use these images to sell dud products like the “Carbon Pollution Reduction Scheme”.

It is not carbon dioxide from burning coal that pollutes the skies of Asia and Africa. Carbon dioxide (CO₂) is a naturally occurring, clean, invisible, beneficial gas. CO₂ is an essential part of the natural world but a very minor trace constituent of our atmosphere.

The major gases in the atmosphere are Nitrogen (78%), Oxygen (21%) and Argon (less than 1%). These three gases make up 99.9% of the atmosphere (ignoring the variable water vapour which can rise to 4%). Seven other trace gases, including CO₂, together make up less than 0.1% and CO₂ is less than 0.04%.

This trace amount of CO₂ in the atmosphere is the aerial food store for all plants, and thus also sustains all animals, including humans. CO₂ is a boon to life, not a pollutant.

Moreover, the claim that man’s emissions will cause dangerous global warming is strongly and increasingly disputed by scientists and is not supported by historical evidence. It also defies common sense to believe that such a minor natural gas can cause all the climate disasters that are blamed on it.

We are about to hang an innocent hero.

Asia’s visible pollution is largely caused by the crude and inefficient open air combustion of low quality fuels. It is caused by millions of open-air cooking fires in India, China, North Korea and Africa using scavenged fuels like cow dung, cardboard, wood, and low quality coal and coke; by thousands of backyard brickworks and small dirty furnaces along the Yangtze River and in other places; by forest clearing fires in Indonesia and bush and grass fires elsewhere; and by millions of small obsolete and dirty wood, charcoal and coal stoves, heaters, boilers and furnaces all over Asia and Africa. Similar pollution is obvious in places in South America. “Open fires” was the cause of similar smogs in England as recently as the 1950’s.

Open-air combustion of poor quality carbon fuels produces not only the harmless clean so-called “greenhouse” gases of water vapour and carbon dioxide, but also real pollutants such as soot, smoke, ash, dust, unburnt fuel and chemicals containing sulphur, chlorine, nitrogen, fluorine, and metals. In confined unventilated places, open fires can also produce the very poisonous gas, carbon monoxide – this is the one that will quickly kill the canary. China also emits more sulphur dioxide than anywhere else in the world. This chokes their people, causes acid rain and damages buildings.

The elements contained in smoke pollution all came from rich ancient soils in the first place, and are needed in soils today in trace quantities to maintain the health of plants and animals. In dilute quantities, they are not a problem in the atmosphere, and rain recycles them to enrich the soil. But when concentrated in city air, they can be visible, annoying, corrosive or even toxic.

The “Asian Brown Cloud”, is a haze of pollution about 3 km thick and sometimes covering an area as big as Australia. The brown haze obscures the sun in some polluted Asian cities and at times this cloud drifts right across the Pacific Ocean and is noticed as far away as the west coast of America.

This pollution is already affecting local climate and community health. In Arctic areas, soot drifts onto snow making it darker in colour which allows it to absorb more heat from the sun. This process may be contributing to melting glaciers in China and the Himalayas.

The western world went through this pollution phase half a century ago, and although improvements can still be made, we have banished the notorious smoke pollution in places like London, Manchester and Pittsburgh.

Today’s Beijing Smog is a tame affair compared some air pollution events of the past.

For the century ended in about 1960, London smoke pollution was so bad that the city became known as “The Big Smoke”. Children developed rickets from the lack of sunshine, plants and animals died and lung disease was widespread. Mike Williamson, a Brisbane resident who lived in Yorkshire at that time, says that the smog was sometimes so dense that a driver could not see the curb, and the passenger was obliged to walk along the edge of the road with a torch to lead the way. Mike says “Buses stopped running and trains ran with difficulty because signals could not be seen. Detonators were placed on the rail tracks to warn trains of potential dangers.”

England’s last and worst ever pollution event, “The Black Fog” of 1952, was triggered by a temperature inversion over London. Visibility was reduced to less than one foot and 4,000 Londoners died from SO₂ poisoning (50 in one small London park alone).

This shock brought action.

Two things cleared the Big Smoke from London and Manchester. Firstly was the passage of the Clean Air Act in 1956 - cooking and heating with open fires of wood and coal was banned in big cities. But bans would not have worked without other better heating options. No matter what the laws say, people will use whatever fuel they can find to keep warm and cook their food. Londoners only stopped burning wood and coal in their homes when electricity and smokeless fuel came available. The government encouraged people to use electricity – it was called “Coal by Wire”. Clean coal-powered electricity saved the forests from destruction and cleared the smog from the air.

The western world has largely beaten its city smogs, firstly with inventions such as the chimney and the stove, secondly with clean air legislation and anti-pollution technology and finally with the magic of electricity – the clean, silent, invisible “Coal by Wire”.

This clean energy can be generated reliably 24 hours a day, using high quality coal in non polluting power stations located far from densely populated areas. It is then transported silently and cleanly with zero pollution and minimal loss of energy to deliver lighting, heating, cooling, cooking and motive power into the most humble home in the poorest suburb. It is the magic of the modern world.

To fly over a modern non-polluting coal-fired power station at say 10,000 m is to put things into perspective – a puny cooling tower or two emitting wisps of water vapour (steam). They also emit carbon dioxide, but this is invisible and harmless (in fact generally beneficial). These wisps of steam are regularly displayed dishonestly on TV to illustrate the supposed pollution caused by coal power (or they dig up a picture of an old dirty polluting power station). There is almost no pollution, no noise, no smoke and no landscapes of forests of whirling blades and solar panels in a modern coal burning power station. In fact those wisps of steam are often the only visible evidence that massive energy conversion is taking place inside - coal into electricity.

Yet that facility and its linked coal mine can supply a whole city with heat, light and power for machines as diverse as the handyman’s drill, the kitchen toaster or the locomotives that move train-loads of commuters in safety and comfort during rain, hail, snow or heatwave.

“Coal by Wire” has already banished most of the terrible pollution that affected cities such as London, Manchester and Pittsburgh, and allowed the regrowth of American forests. City pollution now comes not from coal, but from cars sitting in traffic jams caused by poor road design, inefficient traffic controls and lack of sensible pricing for congested roads.

Today's irrational and hysterical focus on harmless carbon dioxide by governments and media is misdirected and counter-productive. It is diverting attention and resources from damaging pollution which is altering local climate and affecting many areas of the world. And it is delaying the spread of coal powered electricity to many areas now desperate for clean invisible power.

It is also giving an enormous boost to the demand for nuclear power, for all the wrong reasons.

The world pollution problem which is most obvious now in Asia, presents a real opportunity for Australian energy companies to make profits and clean up the environment. All Australians will benefit from a stronger economy and from the satisfaction that will come from being able to point to the contribution we can make to cleaning up the REAL pollution represented by the smog over the Olympic Stadium.

Instead of trying to lead the world to commit Kyoto suicide, Australian politicians should be promoting clean non-polluting modern power stations burning high quality Australian coals. Just one well designed, well scrubbed, Australian designed coal power plant running on Australian coal could provide the light, heating, cooling and entertainment silently and invisibly to the front door for about 3 million Asian homes, housing maybe 10 million people. No wonder the Chinese are importing coal and building modern power stations as quickly as they can. They recognise clearly that their huge cities need "Coal by Wire".

History shows that people cannot and will not live without energy in their homes. Unless we allow coal to supply clean silent invisible electric energy, the people will continue to burn dung, wood, cardboard, trees, oil, charcoal or reject coal to get their warmth or cook their food.

If Asians had access to better fuel, it would allow cow dung to be used for soil improvement and would encourage forest regrowth in areas denuded by centuries of scavenging for fire wood.

Russian scientists are not conned by the Kyoto hysteria focussed on the harmless natural gas, carbon dioxide. In fact the Russian Academy of Science advised President Putin that the Kyoto Protocol had "no scientific foundation" (Putin joined Kyoto for other very sound political and economic reasons that had nothing to do with global warming).

Man's emissions of CO₂ are a miniscule factor in determining Earth's temperature. But while we are wasting decades of time and buckets of money trying to catch and imprison this harmless Will o' the Wisp, an ominous brown smelly choking cloud of real pollution is growing in our northern skies.

Russian ecologist Dr Sergei Golubchikov has the last word:

“Ecological treaties should seek to curb emissions of sulphur dioxide, nitrogen oxides, heavy metals and other highly-toxic pollutants instead of targeting carbon dioxide, which is a non-toxic gas whose impact on global warming has not been proved.”

Link:

<http://www.hindu.com/2008/07/10/stories/2008071055521000.htm>

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Disclosure of Interest:

Viv Forbes has a degree in applied science and has worked (sometimes unpaid) as a geologist, mineral economist, public employee, company director, journalist, political gadfly and farmer. He has special interest and training in the improvement of natural pastures and soils by better management of grazing animals. He now earns intermittent income from three carbon dependent industries - coal, cattle and sheep. He also uses cement, steel and electricity, buys diesel for his tractor and petrol for his car. He uses trains and occasionally boards an aeroplane. He eats carbon based foods, pays fuel taxes and uses government services funded by taxes on the carbon industries. His superfund occasionally owns shares. All of these interests will be harmed by carbon taxes or carbon emissions trading. Like the great majority of Australians, he has a big vested interest in the outcome of this historic debate.

Further references: For those interested to study the history and science of coal and pollution, a good reference is the book:

“Coal, a human history” by Barbara Freese, 2003, printed in UK by Arrow Books, 2006.

Barbara was assistant District Attorney in Minnesota for 12 years, responsible for enforcing air pollution laws. She became interested in the science and history of coal and smoke pollution when she got involved in a long legal proceeding about the effect of electricity generation in Minnesota on global warming. She is no friend or patsy of the coal industry, but it is a well researched, well documented, honest book, and an easy interesting read.