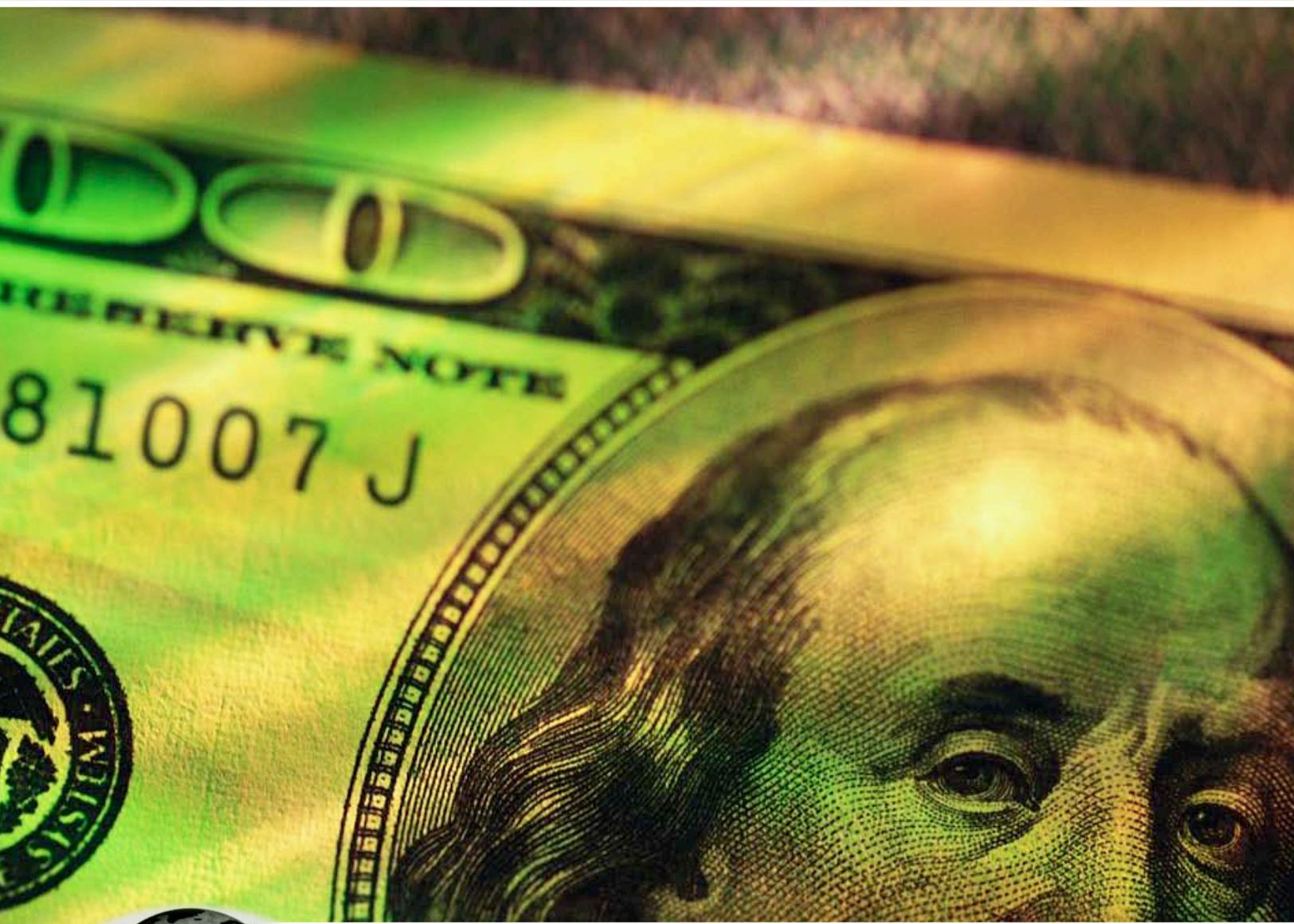


ANOTHER DAY, ANOTHER DOLLAR – CFC'S AND THE UN

by Dennis Ambler



SPPI ORIGINAL PAPER



August 31, 2010

ANOTHER DAY, ANOTHER DOLLAR – CFC’S AND THE UN

by Dennis Ambler | August 31, 2010

Even the UN and the EU are wising up to the greenhouse gas scam, "the biggest environmental scandal in history", says [Christopher Booker](#) in the Sunday Telegraph. "Indeed this is a scam so glaringly bizarre that even the UN and the EU have belatedly announced that they are thinking of taking steps to stop it. The essence of the scam is that a handful of Chinese and Indian firms are deliberately producing large quantities of an incredibly powerful "greenhouse gas" which we in the West – including UK taxpayers – then pay them billions of dollars to destroy."

The CFC story is a parallel for the CO₂ story and was another EPA “cause celebre”. Claims of dramatic changes to the atmosphere were made; time was running out, the world was in danger and it could only be saved by “Global Action”.

For public consumption it is usually stated that the Ozone hole was first discovered in 1985, by British scientists Joseph Farman, Brian Gardiner, and Jonathan Shanklin of the [British Antarctic Survey](#), although NASA stake a claim for two years earlier.

However on the BAS website it states that they have been monitoring ozone in the Antarctic since 1956. One wonders why, in all that time, they found no problem, when CFC’s had been in use for refrigeration since the 1930’s. Suddenly, in 1985, it was discovered for the first time. [Or was it?](#)

“Atmospheric ozone is measured in **Dobson Units**, (DU), named for the Oxford academic Gordon Miller Bourne Dobson (1889-1976), one of the pioneers of atmospheric ozone research and inventor of the Dobson Spectrophotometer, used to measure atmospheric ozone from the ground. During the International Geophysical Year of 1956 there was a significant increase in the number of these devices in use around the globe and the Halley Bay (Antarctica) anomaly was discovered.”

In a paper titled "Forty Years' Research on Atmospheric Ozone at Oxford: A History" (Applied Optics, March 1968), Dobson described an ozone monitoring program that began at Halley Bay in 1956.

“When the data began to arrive, "the values in September and October 1956 were about 150 [Dobson] units lower than expected. ... In November the ozone values suddenly jumped up to those expected. ... It was not until a year later, when the same type of annual variation was repeated, that we realized that the early results were indeed correct and that Halley Bay showed a most interesting difference from other parts of the world.”

The BAS web site has data for **2009-10** and reports that:

“Ozone values dropped, to reach a minimum of around **125 DU** (60% depletion) in late September, (Antarctic spring). The lowest daily value measured was **107 DU** on October 1. This minimum value is **similar** to those recorded each October **since the early 1990s.**”

It is also similar to those in the spring of 1958 at the French Antarctic Observatory at Dumont d'Urville [opposite side of the South Pole from Halley Bay], when Rigaud and Leroy [quoted in *Annales Geophysicae* (November, 1990)] **reported atmospheric ozone levels as low as 110 DU.**

GLOBAL WARMING'S LITTLE BROTHER

In 1974, Mario Molina, a postdoctoral researcher at UC Irvine, co-authored a paper in *Nature* highlighting the threat of CFCs to the ozone layer in the stratosphere. CFCs were then widely used as chemical propellants and refrigerants. In September 1974, he and his co-author, Frank Sherwood Rowland, convened a press conference at a meeting of the American Chemical Society, in which they called for a complete ban on further releases of CFCs into the atmosphere. A review of their work by the National Academy of Sciences in 1976 led to the US unilaterally banning the use of CFC's in aerosols in 1978. This ultimately led to the '**Montreal Protocol On Substances That Deplete The Ozone Layer**' (Montreal Protocol), in **1987** and a Nobel Prize in Chemistry for Molina, Rowland and Paul Crutzen from the Max Planck Institute for Chemistry, in 1995.

The Montreal Protocol's provisions were tightened in 1990 and again in 1992, culminating with a CFC ban in most developed nations by 1996.

The measurement of CFC decline is derived from manufacturing figures. The reality was somewhat different, in that, because of the panic surrounding CFC's, fridges were suddenly dumped and in the UK alone, hundreds of thousands of appliances were stored in the open air, rusting and leaking CFC's to the atmosphere. Of course those losses were not measured, but the official position is that the Ozone Hole over the Antarctic has been resolved by phasing out CFC's as a result of International Action. The Montreal Protocol set the scene for the Kyoto Protocol to control CO₂ emissions.

Since its replacement by anthropogenic CO₂ global warming claims, the issue of CFC damage to the ozone layer no longer receives critical examination. Instead we get statements claiming this was a classic international regulatory success in controlling the excesses of human existence.

It seems, however, that reports of ozone's "recovery" are greatly exaggerated. In **August 2006**, the WMO issued this statement:

Antarctic ozone forecasted to recover in 2065.

A new scientific assessment, released Friday by the World Meteorological Organization, WMO and the United Nations Environment Programme (UNEP) says that the stratospheric ozone layer that protects life on Earth from excessive solar radiation will recover five to 15 years later than previously expected.

Because of special conditions within the Antarctic vortex (a natural cyclone of super-cold, super-fast winds), the Antarctic ozone hole is **expected to recur regularly for another two decades.**

UNEP and WMO are both subsidiaries of the UN and also joint promoters of the IPCC. Their assessment suggests that this is more of a natural phenomenon than is admitted. They explain why there is no Arctic ozone hole in the Northern hemisphere, where most of the anthropogenic CFC's have been released, by the fact that the Arctic is not as cold as the Antarctic.

However, there are those who predict an **Arctic Ozone Hole** to come.

“An Arctic Ozone Hole, if similar in size to the Antarctic Ozone Hole, could expose over 700+ million people, wildlife and plants to dangerous UV ray levels. The likely hood of this happening **seems inevitable** based on the **deterioration of ozone layer** caused by the **effects of global warming** on the upper atmosphere.”

So these happy souls don't even bring CFC's into the picture for their scary scenario.

There is of course, no knowledge of whether the Antarctic ozone hole has been growing and shrinking since time immemorial, before anyone ever thought to measure it and link it to CFC's.

NATURAL SOURCES OF CFC'S?

It is emphatically claimed by the EPA and repeated in all discourse on the issue, that there are no natural sources of CFC's. There is considerable evidence to show that their stance is wrong, as shown on the website of an Australian geologist:

"CFCs are not Volcanic" - Oh Really?

“This statement is one that I keep seeing on websites and blogs, and ties in with the assertions repeated by Warrick & Farmer (1990), Grimston (1992), Hendeles et al. (2007), Colice (2007), Colice (2008), and Green & Stewart (2008, p. 18) to the effect that CFCs are not natural in the environment.

If one chooses to measure the gases emerging from volcanic vents instead of taking a politician's word for it, one discovers that **volcanoes produce a variety of halocarbons, including CFCs.** This fact, along with **other natural**

sources of CFCs including sponges, other marine animals, bacteria (both marine & terrestrial), fungi (both marine & terrestrial), plants (both marine & terrestrial), lichen, insects, is so well documented that it is the subject of ongoing textbook publication (Gribble, 2003; Jordan, 2003). Stoiber et al. (1971) first measured and documented CFCs venting from Santiaguito in Guatemala.

Since, (then) there have been many studies corroborating the volcanic emission of CFCs (Isidorov et al, 1990; Isidorov et al., 1993; Jordon et al., 2000; Schwandner et al., 2000; Schwandner et al., 2002; Schwandner et al., 2004; Frische et al., 2006).”

Volcanoes are not the only source of natural emissions, as shown by the **British Antarctic Survey**, who in **July 2007**, issued [this press release](#):

“LARGE quantities of ozone-depleting chemicals have been discovered in the Antarctic atmosphere by researchers from the University of Leeds, the University of East Anglia, and the British Antarctic Survey.

The team of atmospheric chemists carried out an 18-month study of the make-up of the lowest part of the earth's atmosphere on the Brunt Ice Shelf, about 20 km from the Weddell Sea. **They found high concentrations of halogens - bromine and iodine oxides** – which persist throughout the period when there is sunlight in Antarctica (August through May).”

(The valuable fumigant and pesticide, Methyl Bromide, has been almost universally banned because of its claimed effect on the ozone layer.)

“A big surprise to the science team was the large quantities of iodine oxide, since this chemical has not been detected in the Arctic.

The source of the halogens is natural – sea-salt in the case of bromine, and in the case of iodine, almost certainly bright orange algae that coat the underside of the sea ice around the continent.

These halogens cause a substantial depletion in ozone above the ice surface. This affects the so-called oxidising capacity of the atmosphere - its ability to "clean itself" by removing certain - often man-made - chemical compounds. The iodine oxides also form tiny particles (a few nanometres in size), which can grow to form ice clouds, with a consequent impact on the local climate.”

In the case of CO₂, the role of natural emissions is greatly down-played. In the case of CFC's it is totally denied. However because CFC's are also classed as greenhouse gases, their destruction can qualify under the **UN Clean Development Mechanism**, CDM. This is the subject of a [recent Reuter's report](#), (June 2010), pointing out that some plants are producing

this gas in order to then destroy it and claim Certificates of Emission Reduction, (CER) under the CDM.

“Findings released by CDM Watch, an initiative of non-governmental organizations, showed the most lucrative projects in the CDM, chemical plants that destroy a potent gas called hydrofluorocarbon-23 (HFC-23), may have inflated their emissions in order to destroy them and sell more offsets.”

It also found that plants produced less HFC-23 during periods when they were unable to request CDM offsets, called Certified Emissions Reductions (CERs).

"Analysis of monitoring data from all registered HFC-23 destruction projects revealed that plants are intentionally operated in a manner to maximize the production of CERs," CDM Watch said in a statement. "Because of the extra revenue ... far more HFC-23 is generated than would occur without the CDM."

Because HFC-23 traps nearly 12,000 times more heat than a molecule of carbon dioxide, and because it is cheap to destroy, **HFC offsets account for more than half of the 420 million CERs** issued to date by the U.N.'s climate change secretariat.

Industry participating in the **EU's Emissions Trading Scheme**, which **forces firms** to turn in carbon permits against every ton of carbon dioxide they emit, also surrendered over **100 million HFC credits** in the past two years.

Slashing the flow of HFC offsets would starve an already scarce CER supply, expected to total under 1 billion by 2013.”

The report points out that **“if the U.S. launches an emissions scheme that accepts CERs, global demand could exceed 10 billion tons by 2020**, an amount unlikely to be met even with the current flow of HFC CER’s,” which of course would mean that even more Chinese and Indian chemical factories would be geared to producing more HFC 22 in order to destroy HFC 23 and receive payment for so doing.

This also requires that there is a market for HFC22, production of which was scheduled in the 1987 Montreal Protocol for phasing out in industrialised countries by 2030, although **developing countries** are allowed to **expand production until 2015** and only **stop** producing the gases **in 2040**. This is the “contract and converge mechanism” in action again, as with CO2 emissions. If these gases are so dangerous, why can they be produced for another 30 years?

The CER market for CFC’s is one reason why proponents of global warming, who are involved in emissions trading, want a publicly supported floor price for CER’s. This is what they sought at Copenhagen and will seek again in Cancun at COP 16 and which has been the aim of the interim discussions held in Bonn and no doubt several more interim meetings to come.

The UNFCCC CDM has provided funding for the destruction of HFC-23 from HCFC-22 produced in developing countries since 2003 and such countries have become the largest producers of HCFC-22 in recent years. HFC emissions are included in the Kyoto Protocol and are usually **destroyed by high temperature incineration**.

“Although typical incinerators that burn only HFC-23 produce six pounds of CO₂ for every pound of HFC-23 burned, scrubbers in the smokestack prevent almost all of the CO₂ produced from entering the atmosphere. This reduction in CO₂ emissions occurs while scrubbing to remove hydrogen fluoride (HF) from the waste stream.”

HFC22 is currently used in refrigeration and air-conditioning systems and as a chemical feedstock for manufacturing synthetic polymers.

The abuses were first identified **over three years ago** and have continued since that time. This report is from **February 2007**.

“The creation of carbon credits from the destruction of the potent greenhouse gas (GHG) trifluoromethane (HFC₂₃) has been one of the most controversial issues during the early life of the Kyoto Protocol’s Clean Development Mechanism (CDM).

A by-product of the manufacture of the refrigerant HCFC₂₂, many viewed HFC₂₃ destruction projects as a cheap money-maker for a small number of industrial sites in a handful of developing countries that provided little discernible sustainable development benefit to those countries.

The 10 CDM projects registered so far that are destroying HFC₂₃, have the potential to create around **350 million Certificates** of Emission Reduction (CER’s) in Kyoto’s first commitment period (2008–12) out of a current expected total of about 1.8 billion from 500 registered projects.”

The annual UNFCCC summit known as the Conference of the Parties, was held in Nairobi in November 2006 and called COP12. At that conference, the Chinese delegation called for CER’s to be allowed for the destruction of **HFC₂₃ from new production**, which had not been allowed before.

This was a licence to print money and the World Bank has been dispensing it wholesale. Green groups have been highlighting the way in which the Chinese in particular have been exploiting the scheme:

Chinese firms cashing in on EU carbon trade 16 July 2010

“European industries are subsidising direct competitors in China and India by buying international credits to offset their carbon dioxide emissions, an

NGO said in a new report. EU companies spent around **€860 million last year** buying 78 million international offset credits (CERs) **in order to meet their emission caps under the EU's cap-and-trade scheme.**

The credits, issued under the UN's Clean Development Mechanism (CDM), are designed to allow companies to meet their targets more cost-effectively by financing projects that reduce greenhouse gas emissions in developing countries.

The CDM Methodologies Panel, which advises the CDM Executive Board, is **currently investigating** the crediting of projects that destroy HFC-23, a potent greenhouse gas, which is a by-product of manufacturing a refrigerant gas called HCFC-22.

A report by CDM Watch, a group of green NGOs, showed that companies were playing the system by producing more greenhouse gas than they would have done without the CDM in order to collect credits.

Destroying HFC-23 only costs around €0.17 per tonne of CO₂, and yet Europeans are paying around €11 - the price of one credit - to destroy one tonne, said Fionnuala Walravens of the Environmental Investigation Agency (EIA), an NGO.”

If it were climate sceptics who had raised the issue it would have been described as “climate denial”, but this campaign has been launched by NGO’s and the UN have to be seen to be doing something:

UN halts carbon credits to Chinese HFC plants 23 August 2010

A UN body said last Friday (20 July) it would review a request from a Chinese plant destroying HFC-23 to generate carbon credits after having blocked four similar requests in a bid to ensure that the plants do not deliberately boost their greenhouse gas emissions.

"The CDM has made destruction of HFC-23 so valuable that, at least for some manufacturers, it has become the product, not the by-product," said Clare Perry, senior campaigner at Environmental Investigation Agency (EIA).

The payment of these funds seem so removed from the average tax-payer that they do not get the sense that the money is **coming from them**, but the increase in energy costs is real and accelerating, precisely because of these EU and UN virtual trading schemes, which make Ponzi and Madoff look like rank amateurs.





Science & Public Policy Institute

"Science-based policy for a better world."

Robert Ferguson

SPPI President

bferguson@sppinstitute.org

202-288-5699

P.O. Box 209

5501 Merchants View Square

Haymarket, VA 20169

www.scienceandpublicpolicy.org

