

'Man has role in climate change' - title of my letter in Westmorland Gazette, 22 April 2010 p.17, in response to Trevor Farrer's April 8 letter 'Our oil reserves keep on flowing'

Oil reserves more sticky than flowing

The importance of CO₂

Trevor Farrer (letter April 8) expressed scepticism about 1. oil reserves running out and 2. man's effect on climate change. Here is a scientific response - for readers who like facts and figures.

1. On **oil reserves** Trevor touched upon one very important point when he stated that they are "albeit increasingly difficult to exploit". The **Tar Sands** of Alberta Canada illustrate this point well. They are the second largest oil reserve in the world (after Saudi Arabia). But the big problem here is that the oil is a "dirty oil" - of bitumen mixed with sand and clay etc, and its extraction is so hugely energy intensive that it releases 3 to 5 times the volume of the Greenhouse Gas CO₂ per barrel as compared with "conventional oil" extraction as in e.g. Saudi. The energy is needed to *melt* the oil out of the tar sands using water heated to steam - by burning natural gas at a rate that would otherwise heat 3 to 4 million Canadian homes. The full exploitation of Canada's **Tar Sands** would result in an increase in atmospheric CO₂ of between 9 and 15 parts per million (ppm) - enough to take us to the brink of runaway climate change with catastrophic consequences.

2. Antarctic ice core data shows very clearly that atmospheric CO₂ levels remained very steady at around 280 ppm from year zero AD to around year 1800, and then rose almost exponentially reaching 360ppm in 1996. Furthermore - prior to around year 1900, CO₂ did not exceed 300ppm over at least the last 800,000 years! When this data is plotted (graph on my website) the picture is truly jaw-dropping - and it would be hard for any sceptic to argue that it is merely a co-incidence that this sudden rise in CO₂ simultaneously matches the increased burning of fossil fuels. CO₂ last month reached 391ppm!

It is an established fact that CO₂ is an important greenhouse gas, i.e. put simply it traps significant infra-red radiation or heat within our atmosphere. From this and point 2 it can be inferred that it is *very highly likely* that man is a prime cause of the current climate change.

The full version of this letter is on my website. It also reveals how the UK is a major investor into the Tar Sands and thus climate change, and what we can easily do about this (www.dragonfly1.plus.com).

Henry Adams, Kendal

THE CO₂ GRAPH

NB: Unfortunately this letter when printed in the Westmorland Gazette omitted the words:

'(graph on my website)'. This graph is very helpful for interpreting the CO₂ data and their implications.

It is on my website <http://www.dragonfly1.plus.com/CO2ppm2Kyrs.pdf>

The full version of this letter

I chopped off the last section of the above letter – to do with UK as a major investor into the Tar Sands as 1. it made the letter too long to go into the WG, 2. much of it is hard to read as it assumes extra knowledge and is over-dense. I have appended it here but recommend that it is much easier to read the following article on my website as it provides the information on this subject in a more easily digested style:

<http://www.dragonfly1.plus.com/TAR-SANDS-What-are-they-How-they-affect-us.pdf>

Trevor's assertion on ice-core CO₂ data from millions of years ago is discussed on BBC and New Scientist web-pages (link in www.slacc.org.uk and on my website).

What are your views now on RBS investing billions of taxpayers "bank bail-out money" into the Tar Sands and thus strongly promoting climate change? Do you agree with the government allowing RBS to do this? And will your Election vote support your views on this? Note that there are future financial risks in the Tar Sands as well as environmental, so will "Toxic Fuels" replace "Toxic Debts"?

Does a "Black Gold"en ISA now sound appealing? (Barclays & HSBC are also major Tar Sands investors).

FairPensions with help from e.g. Co-op bank has produced Tar Sands resolutions for share-holders to vote on at the AGMs of BP and Shell. They have made it quick and easy for you if you want to express your concerns to your pension providers to influence their vote as major share-holders (www.fairpensions.org.uk/tarsands/action).

The website for South Lakes Action on Climate Change *Towards Transition* has information on oil reserves (click "Peak Oil update") and an illustrated article on the Tar Sands on its BLOG page (www.slacc.org.uk). For more Tar Sands information and links visit www.dragonfly1.plus.com.