

NEWSLETTER

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RESOURCE AND ENVIRONMENT GROUP — CARBON EMISSIONS

With the recent news that atmospheric CO₂ has reached 400 ppm, this issue reviews a recent report from the Climate Change Committee on UK emissions and returns to the subject of “unburnable carbon”. Both could have major economic consequences, to say the least.

We also look again at ESG principles in investment and a recent IAA REWG meeting.


Please contact us:

- If you have any suggestions for articles for future newsletters or would like to comment on this one
- If you would like to offer to help
- If you have any comments on any matter related to resource and environment

We are listing below email addresses for the REG managing committee. You can also contact Craig Ajimuda (craig.ajimuda@actuaries.org.uk) who is communities leader for the IFoA. We are delighted to welcome new members Claire Jones and Louise Pryor and thank Tony Brooke-Taylor, who has stood down. We are also pleased to note that Nick Silver, one of our members (and former chair), is standing in the current IFoA Council elections.

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Don't blame the Chinese for emissions: they're making our stuff!

The developing world needs our markets and we need them to contain emissions, so as to reduce our footprint



Imported emissions lead to increase in UK carbon footprint

“Reducing the UK’s carbon footprint and managing competitiveness risks” (see: <http://tiny.cc/2zjwxw>), is the Committee on Climate Change’s (the “CCC”) latest report. The CCC is of course the independent statutory body which was established under the Climate Change Act 2008 to advise Government on setting and meeting carbon budgets, and preparing for climate change.

Their report finds that UK’s carbon footprint has increased over the past two decades, as growth in imported emissions has more than offset reductions in production emissions within the UK. The total carbon footprint comprises:

- **Production emissions** from burning fossil fuels for electricity generation, in transport including aviation and shipping, and industrial production;
- **Emissions from heating** in households and businesses;
- **Emissions related to a number of other activities** such as agricultural, forestry, and waste management activities;
- **Imported emissions** (embedded in our consumption of imported goods and services and net of exported emissions).

Whilst there has been reductions of around 20% in emissions over the last two decades, before adjusting for imports, the CCC estimates that the total carbon footprint has increased by 10% or more through increased imports, as incomes have grown and manufacturing has shifted to other countries. The report considers whether carbon policies have contributed to this shift in manufacturing (by increasing costs), but concludes that this is not the case.

While the UK’s total carbon footprint has increased over the past two decades, the CCC concludes that it could fall by 70% by 2050, *provided* a global deal to achieve climate objectives is agreed. A tautology? In other words we need China and Vietnam, or wherever our imports come from, to reduce their production emissions, in order to reduce our carbon footprint. This inter-connectivity should not be forgotten in assessing the likelihood and effectiveness of global negotiations.

Low carbon policies and competitiveness

No doubt given current Treasury concerns regarding growth and unemployment, the CCC report also considers competitiveness risks in future due to low carbon policies. The report finds that these risks exist for energy-intensive industries where low-carbon policies could have a disproportionate effect on costs, impacting on profits, location and investment decisions. However, the CCC concludes that the risks are manageable within policies and funding already announced by the Government.

Lifecycle emissions of low-carbon technologies

The CCC’s assessment suggests that the key low-carbon technologies in power, heat and surface transport offer significant savings over fossil-fuel technologies, even when accounting for the full lifecycle by factoring in emissions from manufacture and disposal as well as operation.

The CCC report also assesses the carbon footprint of shale gas and finds that this can be comparable with conventional natural gas, and lower than liquefied natural gas, if appropriate regulatory arrangements are in place (controlling methane emissions). It concludes that there may be a role for UK shale gas substituting imported gas, for example in meeting heat demand, if other environmental concerns can be addressed. But the report is clear that shale gas should not be seen as a viable alternative to investment in low-carbon technologies in the power sector.

This report, together with much accompanying research, provides a wealth of information as to UK carbon policies and their economic implications, both in the past and the future. Its measured tone engenders perhaps a little optimism as to the direction of travel, provided its advice is followed by Government. There are also encouraging snippets, for example that the US could deliver its Copenhagen commitment to reduce emissions in 2020 by 17% on 2005 levels without the need for new federal legislation; and that China has committed to reduce its carbon intensity by 45% in 2020 (compared to a 30% reduction in carbon intensity implicit in the UK's third carbon budget). We shall see.

**US could deliver
its Copenhagen
commitment**

Unburnable carbon

This issue, mentioned in previous newsletters, continues to gather momentum. In summary: if the world meets carbon reduction targets, much of the oil and coal assets presently included in balance sheets, and corresponding debt, may have questionable value. We are in contact with the Smith School of Enterprise and the Environment at Oxford University, which has established the "Stranded Assets" programme to study various aspects.

The Carbon Tracker Initiative and the Grantham Research Institute on Climate Change and the Environment at LSE recently published an updated report on Unburnable Carbon (see: <http://tiny.cc/11jwxw>), including a foreword by Lord Stern. It includes an interesting summary of the present state of play on CCS (carbon capture and storage) but concludes that this technology is not likely to have a major impact over the period to 2050: much of our fossil fuel reserves will be "unburnable" if we are to stay within the desired global temperature increase of 2°C.

Standard & Poor's ratings agency has also made an investigation with Carbon Tracker (see: <http://tiny.cc/x4jwxw>). This looks at the possible effect on ratings, as used when pricing debt, using various scenarios as to future oil prices and demand, reacting to possible global carbon restrictions. Rating is of course a highly complex, and not always reliable business, involving many different aspects. However, this limited study seems to conclude that allowing for unburnable carbon has little effect on the ratings of two of the oil majors in the short term and thereafter it will depend on developments and how they react to them.

All these studies are helping to ensure that the unburnable carbon issue is on the agenda of the financial community.

**CCS not a game
changer?**



ESG means alpha?

We are pleased to note that increasing attention seems to be paid to ESG (environmental, social and governance) factors, and/or sustainable and responsible investment, in looking to maximise long term investment returns. One example is a relatively short paper published by Deutsche Bank (see: <http://tiny.cc/j6jwxw>) which claims that such an approach can actually enhance returns. Of course, if ESG is widely adopted in conventional investment processes it may cease to be a source of such out-performance, but nevertheless, more sustainable policies should have wider benefits for society!

The NAPF have also updated their guide to “Responsible Investment” (see: <http://tiny.cc/dvbyxw>)

IAA Resource and Environmental Working Group (“REWG”)

This is the new name for the International Actuarial Association working group. Our chair Oliver Bettis, is also chair of the REWG and made a presentation at the recent IAA Council and Committee meeting in The Hague, including a half day REWG session.

North American, Australian and European actuarial associations were represented and presentations included regional research in progress. We can look forward to research on the psychology of climate change denial, from our Irish colleagues, Climate Index development, commissioned by our North American colleagues, as well as REG’s (UK) upcoming literature review set to focus on the sustainability of the financial system.

More details of this event will be provided to REWG members and on the IAA website (see: <http://tiny.cc/kzcyxw>). Contact the IAA secretariat to join the REWG.

REG on LinkedIn

There is now a Resources and Environment group on LinkedIn which you can join if you have joined the REWG (and of course LinkedIn):

http://www.linkedin.com/groups?gid=4417984&trk=myg_

Visit the webpage (if you log in you will have access to a more complete list of REG documents):
<http://www.actuaries.org.uk/members/pages/resource-and-environment-member-interest-group>