



A climate for change

Fraser Wheeler continues his series on the changing world in which we live and what can be done on a local level to help mitigate the consequences of climate change

Nearly 30 million acres of land in Canada burnt down over recent months, about the size of England. The events this summer, including high temperatures and wild fires in southern Europe, the southern US, and China, and a dramatic loss of ice in Antarctica the size of Argentina, are part of a trend that every decade since the 1980s has been consistently hotter than the previous one.

This trend had been accurately predicted by the International Panel on Climate Change (IPCC), with future events to become more intense and frequent. This year El Niño is reinforcing the trend. In the UK the Met Office expects the unprecedented hot weather of last year to become typical by 2060 on current trends. Globally we are now at 1.1 degree C above the earth's temperature pre-coal, and on course to reach 1.5C within a decade, after which the risk of breaching tipping points escalates. It is sobering to say the least.

Who's responsible? China is currently the biggest emitter of greenhouse gases by far, more than the US and Europe together. China is a big challenge, but it's not that simple. Per capita its emissions are well below the US. China is also by far the global leader in clean technology, so very much a part of the solution as well as the problem. And the US and Europe have been carbon emitters of scale decades before China.

Fossil fuels form 80 per cent of global energy, causing 75 per cent of the emissions. According to the International Energy Agency (IEA) global oil demand this year is set to grow to 102 million barrels a day, 70 per cent from China. Even global coal demand, which is supposed to be phased out, is set to stay at record levels this year, with strong growth in Asia off-setting the decline in North America and Europe.

A challenging context, but there is some positive momentum: the cost of renewables is highly competitive, and they now account for 30 per cent of electricity generation; this year in China renewables and other low carbon energy sources overtook fossil fuel generating capacity for the first time; global electric car sales reached a record high of 10 million last year,

a tenfold increase in 5 years; energy efficiency has doubled, and overall global investment in clean energy has increased by a third in the past year to \$1.7 trillion. The mining industry has shifted focus towards the minerals of the energy transition such as copper, nickel, cobalt and lithium, spurred by western concerns of a Chinese stranglehold. And nature is now appreciated for its intrinsic value to our prosperity and health, with global recovery efforts underway.

The question is whether the transition will be fast enough. The last major energy transition from coal to oil took well over 100 years, this one will need to happen within a few decades. Electrification is clearly the future, and it will need to expand by a factor of 4. This will involve the overhaul of transmission grids, and continued innovation in power storage. Renewable energy will need to continue to grow exponentially, and to include nuclear, which grew 40 per cent last year, with a mirrored decline in the use of fossil fuels. Carbon capture and storage is receiving attention, though it is unproven at scale and is expensive. Further innovation is required where emissions are harder to tackle such as the manufacture of steel and cement, and long haul transport.

Climate change has been described as the biggest market failure in history, because the polluters do not pay for their damage, and our prosperity has been built at the expense of nature. According to the Organisation for Economic Co-operation and Development (OECD), 60 per cent of carbon emissions from the largest economies still

remain unpriced, and only 10 per cent are now taxed at the level of their true cost. This needs to change.

One way that is gaining traction is through a tightened cap and trade scheme. Cap and trade is when a cap is set on CO2 emissions for an industry, then split into permits for emission allowances. Those that don't need permits (because they reduce emissions) can sell to those who do (because they have not reduced their emissions). The cap gets stricter every year, and the permits get more expensive: the market creates incentives to reduce emissions, and disincentives to emit. With previous schemes the price has been set too low, and there has been carbon leakage with companies moving to a country where regulation is lax. The EU is now taking a lead on reform, setting a minimum price, and a carbon border tax to prevent leakage. The reality is that it can only work if China is brought on side.

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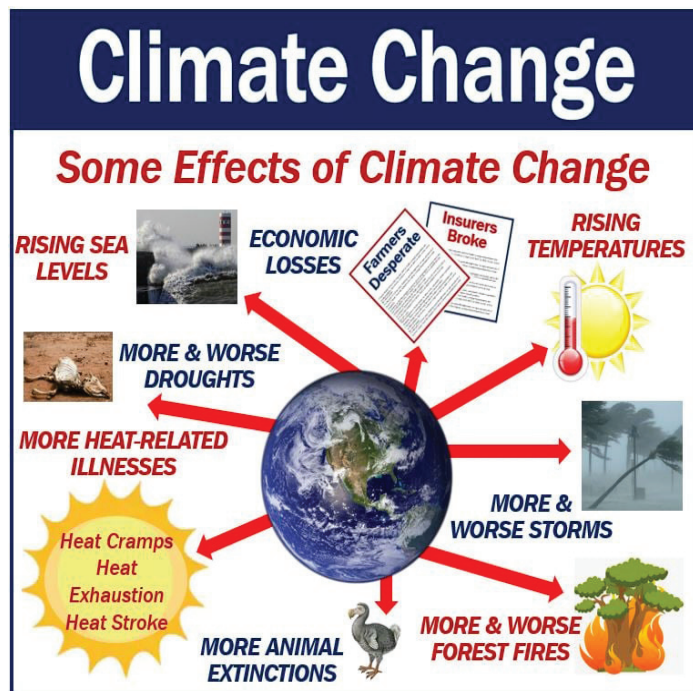


Chart: marketbusinessnews.com



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Meanwhile, the politics continues to evolve. In the US, the Inflation Reduction Act, centered on green economic growth, would not survive the re-election of Trump. His core support in the Sun Belt is ironically sweltering under heat domes (or would be, without the air conditioning at full belt). In Germany there has been push-back against the ban of gas boilers next year because of cost and a tight deadline. And in the UK a government well down in the polls is starting to adapt its climate commitments, eg to support drivers concerned at environmental charges.

There is a lesson here. Polluters need to pay, but costs need to be levied as proportionately and progressively as possible. President Macron's dismal experience with the gilets jaunes over his diesel tax in France is a case in point. The current weather events should bolster climate action, but governments need to manage the near-term costs of the transition.

From the macro to the micro, what of Amberley? Horsham Council (HDC) is developing a climate strategy to achieve carbon neutrality by 2050, and wants to engage with us.

Amberley's competitive advantage is surely our natural capital. Amberley has some unique and valuable habitats, that need to be restored, preserved, and expanded (details in last month's article). This effort is underway.

We have already developed a niche in recycling, with our internal market for goods on the gaggle intranet, and the volunteer effort to recycle what cannot be handled by the local authority. There is a new repair cafe in Amberley on 23 September. Food waste might be the next area of focus.

In terms of carbon emissions in the Horsham district, most come from buildings and transport. In Amberley we have a majority of homes heated with oil. There is a small but growing minority who have switched successfully to heat pumps (these can be installed in 90 per cent of properties, insulation is a pre-requisite), but not everyone is in a position to do so. For example the government grant has shrunk by a third. On transport, the cost of electric cars is high (though over a lifetime they are much cheaper than their petrol equivalents), and the charging infrastructure is poor (the parish council is intent on installing chargers in the car park but the rolling 7 year lease from HDC acts as a commercial deterrent to suppliers). Apart



Getting the message across at Amberley's Eco Fair

from the railway, public transport is scant. This is the context in which to consider practical ideas to reduce emissions.

Climate adaptation will also require future attention. The predicted hotter summers and wetter winters will impact our infrastructure, and working with local bodies we need to be prepared.

There is plenty to consider. Local priorities will be drawn up with the community and others, and funding and volunteers will be sought. Working with others, we need to make a practical difference. A climate for change.

Help for small businesses

Small businesses in West Sussex are invited to benefit from new in-person digital growth support that will be touring the county from September. Workshops and mentoring will be provided free to businesses, with the aim of helping small and medium-sized enterprises (SMEs) to increase their efficiency, reduce costs and win new customers.

Grow Digital West Sussex will provide businesses with expert guidance on improving digital capabilities, give people an opportunity to connect with other business owners and enable them to opt in to one-to-one mentoring. The are scheduled to run until next April.

The workshop days will cover a variety of digital topics, including social media and digital marketing, online selling and smarter working, so participants can pick the workshops or days that are most relevant for them.

The programme is being delivered by Freedom Works, Wired Sussex, Creative Bloom and Shake It Up Creative and is being jointly funded by West Sussex County Council and the district and borough councils across the county.

"West Sussex County Council is committed to the growth of our local economy, and helping our businesses make better use of digital tools vital to increasing productivity and growth: a sustainable and prosperous economy is one of the priorities in our Council Plan," said WSCC leader Paul Marshall.

For more information, contact business.support@westsussex.gov.uk