

## Watlington Climate Action Plan: What does “Net-Zero” mean?

My last article looked at why increasing Carbon Dioxide (CO<sub>2</sub>) levels in the atmosphere warms the planet and why we should be worried about it. This article looks at what we mean by Net-Zero and how it can be achieved.



Artist's impression of a Carboniferous landscape. Image credit: Plant Evolution and Palaeobotany

Let's start 300 million years ago at the start of the Carboniferous period. Carbon Dioxide levels were at 1,500 parts per million (ppm) and global average temperatures were around 20°C. Lush forests of early trees covered the land, absorbing the CO<sub>2</sub> and turning it into leaves and wood which, when buried underground, became coal and oil. Over the next 50 million years that process reduced CO<sub>2</sub> levels to 350ppm, (the same level it was when I went to school) and global temperatures fell to 15°C, about the same as today.

Skip forward to 1780 and the start of the industrial revolution. For the first time coal was dug up in vast quantities and burnt, turning all that long-stored carbon into carbon dioxide and releasing it into the atmosphere. Ever since CO<sub>2</sub> levels have

risen and with them global temperatures. Unless we stop digging up buried carbon and burning it, that increase will continue with unknown consequences.

The UK government has committed to achieving a “Net Zero” for Carbon Dioxide by 2050. That is, the amount of CO<sub>2</sub> the UK produces will be either reduced or an equivalent amount removed from the atmosphere so that emission less removal equals zero. At “Net Zero” the total concentration of CO<sub>2</sub> in the atmosphere will stop rising.

If all countries achieve “Net Zero” it will stop things getting worse but it won't entirely solve the problem. Temperature rises will continue for a while (experts think that rises until 2050 are already “baked in”) and it will take thousands of years for CO<sub>2</sub> in the atmosphere to be permanently absorbed by oceans and plants before we see temperatures returning to current levels.

Achieving “Net Zero” is a huge challenge for a society powered by coal, gas, petrol and oil but it is an important goal if we are to halt the rise in temperatures. We have to find a way to get there. So what is Watlington going to do about it?

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