Opinion & Analysis

US stance must change to solve climate change crisis

JOHN GIBBONS

While the US developed a response to ozone depletion, it refuses to face down the threat of climate change

THERE ARE some challenges that are just too big for individuals, even individual countries to try to tackle alone. When it comes to climate change, one huge political challenge, as identified this week by the Danish climate minister, is the US. "Until the US changes its position, we will not have China and other growing economies on board," said Connie Hedegaard. The US is, she added, the key.

The Bush administration has well earned the opprobrium heaped upon it for its cynical foot-dragging and denial of the growing climate crisis. The irony is that on the other great environmental crisis of our times – ozone depletion – it was the US that led the world in developing binding international agreements that allowed us to narrowly avert a calamity.

Just how close we came is worth considering. The story begins with the inventor, Thomas Midgley, the individual who "had more impact on the atmosphere than any other single organism in Earth history", according to historian Prof John McNeill.

In 1930, Midgley (who also came up with the idea of putting lead in petrol) gave the world Freon, the first of the chlorofluorocarbons (CFCs). These were initially hailed as a scientific miracle. Inert, seemingly harmless and safe, they were widely used as aerosol propellants and in fridges and air conditioning units.

By the early 1970s, over one million tonnes of CFC emissions a year were silently making their way into the ozone layer in the Earth's stratosphere. Ozone is a rare form of oxygen that filters out over 99 per cent of deadly solar ultraviolet (UV) radiation. Without this stratospheric screen, there would be no life on the surface of this planet.

In 1974, two scientists published a theoretical paper speculating on what impact CFCs might be having on the ozone layer. One of the authors, Sherwood Rowland, arrived home one evening from the University of California and said to his wife: "The work is going well, but it looks like it might be the end of the world."

They had identified that at extremely high altitudes, CFCs are bombarded by solar UV radiation, causing a release of chlorine. A single molecule of chlorine can destroy up to 100,000 ozone molecules. This was bad news.

Although the study had little direct physical evidence to back it up, it was widely accepted by both government and the public in the US. The US Environmental Protection Agency instituted a ban on CFCs in aerosols in 1978. The US emerged as the clear world leader in tackling the ozone threat, and its influence meant many other countries quickly fell into line. The CFC manufacturers weren't going to give up without a fight. In July 1975, for instance the chairman of DuPont described ozone depletion as "a science fiction tale, a load of rubbish . . . utter nonsense". This line may sound familiar if you've been listening to climate change sceptics recently.

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Progress on eliminating CFCs stalled with the election of the pro-industry Reagan administration in 1981, and ozone disappeared from the political agenda even faster than from the stratosphere.

Then, less than five years later, a bombshell. The British Antarctic Survey had discovered a gigantic area of severe thinning in the ozone layer. Science theory had become fact. This hole had in fact been growing since the 1970s, but astonishingly, it had gone undetected for several years.

The evidence was overwhelming, as was the public reaction. Reagan's interior secretary Donald Hodel then floated the idea that instead of tackling ozone depletion, people should instead "adapt" – by wearing sunglasses and a hat when outdoors. Hodel's "Ray Ban plan" made him a laughing stock and the US quietly got back on board. By September 1987, the Montreal Protocol had been signed, in which 24 countries had committed to cut CFCs by 50 per cent within 10 years.

Today, 21 years after Montreal, worldwide production of CFCs has been cut by 95 per cent. These chemicals are persistent, however, and it will take at least another 70 years before the ozone layer recovers. Nor is the battle yet over. The Bush administration today continues to insist on its right to use the pesticide methyl bromide, another potent ozone destroyer. Indeed, back in 1930, Thomas Midgley might as easily have chosen bromine instead of chlorine as his active ingredient. Had he done so, the ozone hole would today cover the planet.

"More by luck than wisdom this catastrophic situation did not develop," said Nobel laureate, Paul Crutzen. "Montreal would have to be seen as a major international success", according to Peter Lynch, professor of meteorology at UCD. "Of course, we could live without aerosols, but the parallel here is could we do the same for global warming? We can't quite live without energy and transport and we don't have easy alternatives."

The lessons of the ozone hole can help us in tackling climate change. First, without the US engaged, we will certainly fail. Next, vested commercial interests and their PR acolytes must be faced down. They stymied progress on eliminating CFCs for nearly 15 years and some are now fighting an equally grubby war in denying the reality and extent of global warming.

And in case you're waiting for the return of US environmental leadership, there are now just 214 days to go before a new incumbent is installed at 1600 Pennsylvania Avenue.

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