

The UK Noise Association often gets asked about its support for nuclear energy. We back it on noise grounds but we also believe it is safe to do so. This article by Matthew Syed spells out what we believe are the unnecessary fears about nuclear.

We are too emotional about risk — no wonder we make bad decisions
An irrational fear of nuclear has exacerbated climate change. Such faulty thinking pervades our lives

This is an abridged version of an article by Matthew Syed which first appeared in the Sunday Times 14/11/21

In the days after 9/11, images of planes flying into the twin towers circulated through the media. The pictures were dramatic and terrifying. Perhaps understandably, people were gripped with fear and started to change their behaviour as a result. **One of the most significant changes was that many Americans stopped using planes for interstate travel and turned to cars instead. They thought they would be safer.**

But there was a problem with that approach — and you've probably guessed it. On a per-mile basis, driving is about 750 times more dangerous than flying. The attempt to reduce the risk by avoiding air travel therefore had the effect of increasing risk overall. According to one authoritative estimate, 1,595 additional Americans were fatally injured in car accidents as a direct result the following year — well over half the number who died in the twin towers.

I mention this because it illustrates a systematic bias in the way that humans intuitively assess risk. Instead of doing so on a statistical basis, we do so on an emotional basis. We use the gut rather than the head. As Dan Gardner puts it in his book *Risk: The Science and Politics of Fear*, “we routinely encounter risks — even eating breakfast can kill — so we routinely decide which risks are worth worrying about. Overwhelmingly, these judgments are felt, not calculated.”

And this has particular relevance today in the aftermath of the COP conference. **For the past few decades the majority of western nations have largely turned their backs on the clean fuel provided by nuclear energy.** And they have done so for much the same reason that American citizens turned their backs on flying.

The nuclear industry has had its own high-profile, high-emotion disasters. You can probably name them: Three Mile Island, Chernobyl, Fukushima. Nobody died in the first of these incidents and only one in the third (though some hospital patients and others died because of the evacuation); the second had little relevance to the West because it was largely caused by a faulty Soviet design.

But this didn't seem to matter in the public debate that followed them. These were vivid, spectacular meltdowns, involving a strange and alien technology. The political left in many nations used them to demonise nuclear power, in cahoots with a cowardly

political class. This is why nuclear today makes up a fraction of the energy needs of most nations, including our own.

Perhaps it goes without saying that a statistical analysis presents a different picture. Measured by fatalities per terawatt hour of energy produced, coal causes 24.6 deaths, oil 18.4 deaths and natural gas 2.8 deaths. Nuclear, by contrast, causes just 0.07 deaths. It is also vastly cleaner, producing three tonnes of greenhouse gas emissions per gigawatt hour, compared with 820 for coal, 720 for oil and 490 for natural gas. Even solar and wind produce more emissions than nuclear, according to the Our World in Data website. I am not suggesting nuclear is perfect. There are big upfront costs and important issues regarding waste disposal (although new designs may be able to use waste as a source of fuel), but it nevertheless reveals a paradox that will not be lost on many observing the COP process.

The green movement has long warned of the risks of climate change but has simultaneously exaggerated the risks of one of the cleanest and safest forms of technology that could have helped us to address it — and still can.