

You buy fair trade coffee, but where does your energy come from?

Consumers are increasingly conscientious in their shopping habits, but pay little heed to the provenance of their power

Psychologists and economists love to talk about all manner of behavioural biases, not least the primacy attached to immediacy. Stuff that we can see and touch on a daily basis becomes the source of excitement and fascination – as well as a nagging worry.

Take the source of that coffee in that cup in front of you. Where's it from? Is it 'fair'? Who supplied it? How much does it cost? Is it 'green' or 'organic'?

In contrast, energy, electricity and power aren't regarded with such evident consideration and curiosity, although paying an expensive utility bill certainly provokes its fair share of worry and concern.

Very few of us worry about where the power comes from that is used to make our cup of coffee – or, in general, what powers the huge generators that keep our daily lives on track.

Take one example: safety. Coal-fired power stations, for instance, are rightly recognised as a horror when it comes to carbon emissions, but very few of us worry about the number of deaths related to the whole end-to-end process of using coal to produce electricity.

According to estimated data, collected in 2012 by energy expert James Conca, from the World Health Organisation (WHO), the Centers for Disease Control and Prevention (CDC) and the National Academy of Sciences, there are currently 100,000 deaths per trillion kilowatt hours (kWhr) from coal production, rising to 170,000 in China.

Oil-fired power stations are responsible for pollution that causes an estimated 36,000 deaths per trillion kWhr.

Many environmentally-friendly consumers pay a little more for renewable green energy, but even solar and wind power cause 440 and 150 deaths per trillion kWhr respectively.

Care to guess the lowest source of deaths from power production, outside of hydro power?

Nuclear, with around 90 deaths per trillion kWhr.

Nuclear option

Nuclear power doesn't tend to be classed as a green energy source by many consumers, nor as terribly secure. Talk of Chernobyl, Three Mile Island and Fukushima quickly enters the debate.

But according to virtually all long-term analysis, nuclear power is safer than most rival technologies and is arguably as green in terms of carbon emissions. Hence why it is favoured by many influential green thinkers such as Mark Lynas and George Monbiot.

Nuclear power should also matter to most consumers for a more fundamental reason: in many key countries in the developed and developing world it's still hugely important in the mix of global electricity supply. Although, according to BP, it currently supplies only about 4.4 per cent of the world's energy needs, nuclear power makes up nearly 80 per cent of generation in France, 20 per cent in the US and 15-40 per cent in countries such as Spain, Sweden, Canada, the UK, South Korea and Russia.

Furthermore, it is usually the cheapest source of energy in these countries.



Nuclear power remains popular with the policy makers and energy planners because of its reliability – no worrying about there not being enough wind or sunshine – and the security of supply for the basic raw ingredient, uranium.

Source material

A small number of countries dominate production of uranium, including Kazakhstan, via Russia, and Niger. Canada and Australia also feature high up the table, too.

Now a newcomer is on its way, on our doorstep in Europe – and benefiting not just from EU funding, but also subject to its rigorous safety standards.

Berkeley Energia is currently building a world class uranium mine just outside Salamanca, in a historic mining area about three hours west of Madrid. Following a decade of exploration and \$100m of investment, Berkeley is now poised to become one of the lowest cost producers worldwide.

Its low capital and operating costs mean it can generate strong returns, even in the current market, where uranium prices have recently fallen to 12-year lows.

Once in production, the Salamanca mine will be one of the world's biggest producers, supplying over four million pounds of uranium concentrate a year, equivalent to approximately 10 per cent of Europe's total requirement.

So, the next time you switch on that kitchen light – or power up your coffee maker – spare a thought about where the power comes from and who supplied the raw materials that powered the turbines and generators.

Uranium supplied from the Berkeley Energia project in Spain and fed through to reactors throughout Europe might be the smart, safe, low carbon option we all need for a low carbon future.



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