

Let there be light!

Some of our readers will remember the regular scheduled 4-hour power cuts resulting from the miners' strike in 1972, when most electricity came from coal-fired power stations. I was a postgraduate research student, and at these times we gathered in a sitting room with candles and a large fire, and played Monopoly in the semi-darkness.

These days our electricity comes from a much wider range of sources, with an increasing contribution from renewables – sources of energy that are not destructively consumed or can be regenerated on a human timescale, such as biomass, wind and solar energy. We still depend too much on unsustainable fossil fuels and there is much opposition to nuclear energy, but genuinely 'clean' energy is rapidly becoming cheaper, easier and more reliable with much investment in technological development.

According to an official report, nearly 25% of global electricity generation came from renewables in 2016. At least two countries, Iceland and Norway, have 100% renewable energy sources for electricity. It is necessary and desirable to push this improvement forward as fast as possible, the reasons including the limited supplies of fossil fuels (and we need them for better purposes than burning them), climate change driven largely by carbon dioxide from combustion, and other environmental and health issues.



Of course renewable energy is far from new – just think of traditional windmills and water-wheels, though these are now largely part of history. Hydroelectric power has long been with us, and continues to be a major contributor in some parts of the world. Among the fastest growing technologies are solar and geothermal sources, and many of us have banks of solar panels on our house roofs. Scientists continue to find more efficient materials and processes for converting free and abundant sunlight, as well as wind and wave energy, into electricity and heat. Many governments are aiming to phase out petrol and diesel road vehicles in coming decades, and battery technology is one of the major research and investment areas now in industry and university laboratories, with goals of increased efficiency and capacity so we can drive further between recharges.

There's another important reason for developing renewable energy supplies. We take for granted that our electricity is constantly and reliably available through a national distribution grid – at least, when it isn't disrupted by industrial strikes or severe storms. But about 1 in 7 of the world's population have no access to such a supply of electricity, mainly in parts of

Asia, Africa and South America. This isn't just inconvenient, it's a major hindrance to development and life improvements, and can be dangerous; just imagine, for example, a pregnant woman going into a difficult labour at night when there is little or no available light.

Renewable energy is ideal for such local, rural situations where an electricity grid does not exist. Even just one solar panel can generate energy for storage in a battery and then used at night. Small- and medium-scale projects can transform whole communities and make their lives better and safer. Such projects are funded and run by major international agencies such as the United Nations (though not as much as they might be by the World Bank, which continues to invest



disproportionately in fossil fuels), by aid budgets of individual nations such as the UK, and by relief and development charities. One such charity, a specifically Christian one called Tearfund, celebrates its 50th year in 2018 and many churches are marking this by holding a 'Light Service' using as little electricity as possible (perhaps only to show a relevant short video) or none at all – even for making tea and coffee after the service! We'll be doing it at Stocksfield Baptist Church on Sunday 16 September at 10am, and all are welcome to come and take part. You may learn something valuable and interesting.



When I was a boy, we spent a fortnight of our summer holidays each year with my mother's parents. They lived in a big old house next to one of the Norfolk Broads, with no mains electricity, gas or water. For us as children it was a big adventure. But for many in developing countries it's far from fun and life is

tough; renewable energy projects bring them new hope. We can play our part too, not only by donating to development charities, but by reducing our own energy demands, especially for non-renewables. It just takes some simple, and often quite small, changes of habits and priorities. And have you switched to a green energy supplier yet?

Bill Clegg

Modified version of the article in the Tyne Valley Express for September–October 2018