

08 06 2018

Hi

Here are some links and news that I hope you find useful.

1. **Climate Change and Me - excellent series! - tell the BBC what you think**
2. Plastic Fantastic - **Bristol moves to 'Slim My Waste'**
3. **China's CO2 up 4-5%, EU up 1.5%**. We are still subsidising fossil fuels - a lot!
4. No lagoon for Swansea but **taxpayer money for new nuclear**
5. Millennials - the most powerful consumers (but we can all join in)
6. **Garden centres - worse than supermarkets??**
7. **Batteries - we need these**
8. **Hot water** - some thoughts on how to save....
9. Green things going on in Bristol

1. Many of us are critical of the BBC's failure to address climate change, particularly in their news production. However, two weeks ago Radio 4 broadcast [an excellent week-long series called Climate Change and Me](#), each programme lasting 15 minutes. These were five personal statements from scientists and academics who have been observing the changes over decades. Their statements are clear and devastating. If you want a clear view of what is happening around the world, take a listen, and if you like what you hear, [please drop an encouraging comment to the BBC](#). This is one way to help change our media culture.
2. Another series to comment on is [Radio 4's three-part 'Plastic Fantastic'](#) series. We all know we have a problem - apparently only **14% of the UK's plastic is recycled, although it's technically possible to recycle all. 64% goes to landfill and around 23% is exported** (though what exactly is happening to the 2/3 that used to be sent to China and is now banned is unclear).

Things I learnt from the series include the fact that: a) recycling a tonne of plastic bottles **saves around a tonne of CO2 equivalent**; b) consumers buying more recycled plastic gives it a greater value and **an income for Local Authorities to invest in better recycling activities**; c) big manufacturers are reluctant to reduce the number of different plastics they use because they like creating distinctive brands; and d) it is now **technically and practically possible to recycle all plastic (including crisp packets, coffee cup lining etc) using a clever RT7000 machine that cracks all molecules back to basic building blocks - but the energy required and carbon waste was not discussed**. As we all know, consumer and civic power has already achieved a lot on plastics - but much more pressure is

required to move the economics towards more recycling. **Buy [recycled plastic](#) where you can.**

Contamination of waste is, however, a major problem, and although you don't need to put stuff through a dishwasher (!), food waste does need to be removed. Bristol has just launched a '[Slim My Waste - Feed My Face](#)' campaign after a trial in Hartcliffe. By sending it to the anaerobic digestion plant (via our brown waste bins) **each person's food waste can, apparently, fuel a LED light bulb for 6 months, a fridge for 2 months or recharge a phone 2000 times.** If you need general info on what to put in your bins, this is the [Council link](#).

Reducing our use is still key, and the good news is that the [EU plans to ban all plastic cutlery, straws and plates by 2021](#). In the UK, we've had an [85% drop in the number of plastic bags](#) being given out by major retailers. **In Kenya, selling or using plastic bags gets you 4 - 5 years in prison! Maybe we should try that?**

3. At the end of 2016 it looked as if the world might possibly have peaked its CO₂ emissions from energy - but at the end of 2017 there was a disappointing small rise. The figures from the [first quarter of 2018, however, are disastrous](#). It looks as if China's emissions are up 4 - 5% as demand for cars and electricity rises, and in the [EU CO₂ emissions also went up around 1.5%](#). (This seems likely to be an under-estimate since we are simply not including emissions from biomass plants.) It seems that **transport - our bigger cars, more deliveries, increased aviation etc** - is largely responsible although there are enormous differences between countries.

A large part of the problem is that despite the Paris agreement and all our governments' commitments, we are continuing to subsidise fossil fuels. Recent figures for the G7 (the top 7 economies) show that [together we still deliver around £100 billion per year to oil, gas and coal in subsidies](#). The US is the worst offender and just this month Trump has said his government will step in to [prevent unprofitable nuclear and coal fired power plants from going off-line](#). The problem in the US, as here, is that **the incentives and policy framework for renewable generation are not strong enough to keep pace with the schedule for power plant closures.**

4. You will have heard on the news that our government is reversing a many decades long policy of not taking part in the construction (with all its risks) of new nuclear. It seems that **we taxpayers will be taking an equity share - probably a third - in building the Wylfa plant on the Isle of Anglesey**. There is absolutely no doubt that, having set this precedent, we will need to do the same with other nuclear in the pipeline - Moorside (near Sellafield), Bradwell, Sizewell and Oldbury. In order to secure other investment for Wylfa, taxpayers will also guarantee an electricity price likely to be **£77.50/MWh - already far above what we are paying for renewables.**

Just to add to the poor economics of nuclear, a new company has been formed by an investment banker. The company is called [Yellow Cake and it is betting on a sharp increase in the price of uranium in the coming years](#). Uranium has [been extremely low](#) since the Fukushima disaster.

Greenpeace are contesting the Wylfa deal on the grounds of breach of competition rules - [please sign the petition](#). It seems that Hitachi, the lead investors at Wylfa, **will not make a final investment decision till 2019 as many of their shareholders and board are still not convinced this is a viable deal. The economics only work out if this plant keeps producing marketable electricity for the next 50 - 60 years.**

There is one aspect of nuclear that is rarely discussed. We now have **sea level rise of 3mm per year - 3cm per decade and escalating**. Not only do these plants have to be built and perform for 60 years, they then **have to go into a century of 'Care and Maintenance' to secure the hazardous waste that cannot be removed from site. How is this going to work with eroding coastlines and rising sea levels?** Has anyone noticed that Anglesey is a small island? **Please write to your MP. The whole Wylfa deal will be discussed in parliament and now is the time to shout.**

5. It was interesting, and encouraging, to read an FT article this week on how 'millennials' are proving to be extremely powerful consumers, shaking up our retail sector. Not only is the food and drink sector having to react to the [20% of 16 - 24 year olds who consider themselves vegetarian or vegan](#), but in general the younger generation appear to be [reacting against globalisation, demanding local and original, and looking for brands they can trust](#). Unsurprisingly, they are (in OECD countries at least) a pessimistic generation. **What is noteworthy here is the power of the consumer. As individuals, we feel our decisions don't matter. But together - whatever age! - we are extremely strong.**

6. One area of retail that has received little public attention is **horticulture**. I have a **garage full of black plastic pots** of different sizes that, apparently, can't be recycled or re-used by the industry. And although I buy sacks of **peat-free compost** when I need to, the plants I buy from the local nursery are generally grown in peat. (**Peat is the king of soils, carbon rich and if left alone, peat bogs naturally sequester CO2** from the air very efficiently. The Riverside did do a range of British-grown, peat free plants last year but this seems to have stopped.) In a Radio 4 World at One broadcast last week, various representatives of the industry were interviewed - but their conclusion was that **they would only respond to consumer pressure, and at the moment that's not there... Please write / speak to your garden centre and tell them you want peat-free plants in containers you can return.**

One place to buy peat-free plants is [Feed Bristol](#) in Stapleton. On the first Saturday of the month they sell wild flower seedlings which are far more valuable to our wildlife than garden flowers.

7. **Storage is still the missing part in this energy revolution** - it's the bit that really makes sense of renewables. But serious investment in research and development only got going in the last few years.

However, there have been several bits of good news in the last month. Last week a [5MW liquid air storage](#) unit began trials, near Manchester. The idea is that surplus electricity (we have a fair amount, particularly in summer and at night) is used to super-cool air to a liquid, much as we do with Liquefied Natural Gas. When needed, it is warmed and as it expands, it turns a turbine. The **5MW unit can supply 5000 homes for 3 hours but if all goes well, the company plans to scale up to 50MW units.**

Siemens Gamesa, the world's largest wind turbine maker, is also moving into storage. They are currently building a [hot rocks storage plant](#) in Germany (30MW) and in Spain they are testing a [vanadium redox-flow battery](#) system which is based on chemical energy storage and therefore does not have the battery degradation issues of lithium ion. [Vanadium technology](#) is already in limited use in the UK. Meanwhile Lockheed Martin has said they [hope to introduce a flow battery this year](#), that will not need exotic materials such as vanadium. That means it should be relatively inexpensive and without toxic components to dispose of.

We still **need the lightness of lithium-ion for car batteries** but the car manufacturing industry does not want to get into battery manufacture. At the moment, **batteries are generally imported from China.** Last month, Siemens announced a partnership with a Swedish company to start producing the ['greenest batteries in the world'](#). Just bringing production into Europe should reduce associated emissions by cutting transportation.

And finally, if you are still thinking about solar at home and / or would like to install a battery, [E.On has teamed up with Google to launch 'Sunroof'](#) - a combination that has, apparently, been very popular in Germany. Feed in Tariffs stop next April, so it's definitely worth thinking about solar now.

8. If you heard the [Life Scientific interview with John Taylor](#) earlier this month you may have heard the throw away comment at the end: **If all US kettles had the same automatic turn-off technology as we have in Europe, the US could turn off all their nuclear plants...** It reminded me of a statement made by [Dr Daniel Quiggin](#) a couple of years ago when presenting a [Greenpeace report on whether the UK could do without fossil fuels and nuclear](#): **at that time, all the UK's solar production was roughly equal to our un-drunk cups of tea, our boiled but not used water...**

I've taken to keeping a **thermos flask by my kettle** and it gets filled up with any surplus hot water. I'm also trying out a [solar shower for end-of-day washing up](#) - and it's working beautifully! On a sunny day, 20 litres of water is nice and hot by 4pm, and it's saved me several runs of the dishwasher.

9. There's lots coming up in Bristol over the next few weeks:

a) This weekend is [Bristol's Nature Festival](#) and all month the Avon Wildlife Trust is running a [30 Days Wild](#) series of events;

- b) [Bristol Food Connections runs from the 11th - 17th June](#), a chance to find out more about how to support local, organic and seasonal growers and sellers. The week includes a screening of '[In Our Hands](#)', a look at UK agriculture and the potential for small producers;
- c) **Cuadrilla will begin fracking in July at New Preston Road and various actions are planned** - please email me if you would like more information;
- d) [Bishopston Library](#) are hosting a '**Make your own air quality monitor**' event and a Thursday night series, '**Make your home eco**';
- e) Bedminster Energy Group are half way through their Make Your Home Eco course on Tuesday evenings, 7.30pm - just go along. These finish on the 10th July and on the 19th July they will be screening '[Burned](#)', are trees the new coal?;
- f) The [Bristol Tree Forum](#) is looking for volunteers to help survey the city's trees, and also asking you to take selfies and nominate your favourite tree. There is money to be spent on urban trees (it comes from developers) and they need input on where to spend it;
- g) If you are near Glastonbury, Friends of the Earth are screening a film about UK fracking tomorrow, [9th June - Power Trip](#).

Many thanks. **As ever, if you want to come off the mailing list, just let me know.** I hope to be operating from najones2017@gmail.com by next month, but shifting lists has defeated me so far. But do look out for the next email from a different address - it might just happen...

All good wishes.

Nikki