

25 05 2018

Hi

Here are some bits of news that I hope you find interesting.

1. **Let's celebrate some positives** - public pressure is changing things
2. Oil prices are rising - is that good or bad?
3. **MPs ask 'Where is our renewable policy?'**
4. Good news on tidal and wave
5. **Hydrogen** as a gas and transport fuel
6. Brexit poses real problem for our nuclear industry management
7. **Green energy providers - some are not quite as good as they seem**
8. **Drought** partly caused by irrigation - we have a role in this...
9. **SolarAid - a new project to support off-grid power in Africa**
10. **Some local events**

1. As everyone keeps telling me, my talks are depressing. There is so much to worry about. But in fact it's extraordinary how some of our institutions and companies are now reacting to public opinion and shareholder pressure and it's worth **celebrating how fast this is moving**. None of these steps are anyway near enough, but it was fascinating to read this week that ExxonMobil has finally agreed to cut its methane leaks (15% by 2020) and cut its flaring of unwanted gas (25% by 2020); Shell is investing to help supermarkets cut their refrigeration, in geothermal, CHP and microgrids; and BP has just invested in super-fast electric vehicle charging. **These changes are happening because of public pressure and the hard work of millions around the world**, organising divestment campaigns, opposition to pipelines, fracking and other infrastructure, protecting local biodiversity etc etc. Individually our actions mean little, but together environmentalists are really changing the economics and politics of our world. **So keep speaking up and keep spending and investing positively.** None of this seemed possible just two years ago...
2. **Oil prices are on their way up again** - now around \$80/barrel. (They were well over \$100/b in the early part of this decade, and then slumped in 2014, at one point as low as \$25/b.) I am often asked **whether high oil prices are a good or bad thing** in terms of the environment. High prices do deter some consumption (mainly in the Global South, we in the industrialised north are pretty price-insensitive and just pay whatever...). But high prices can incentivise more high-cost, risky exploration and production such as the Arctic, tar sands, ultra deep water and shale. But although there is a rush back into the North Sea, the highest cost basin in the world, it seems unlikely that we will revisit the heydays of six years ago. As one commentator put it in the Financial Times - **we expect 'one last hurrah' for oil - but by the late 2020s 'peak demand' will be a reality and our oil companies will be in a fight for shares in a declining market**. They are acutely aware of this. It will be a very different world

for them - **which is why they are pushing gas as much as they can.**

3. **UK investment in clean energy is at its lowest since 2008.** It **dropped 10% in 2016 and 56% last year.** This is because of the cuts in government support - from feed in tariffs to extending the climate change levy to renewables (!!), withdrawing the Renewables Obligation from onshore wind and cutting the Zero Carbon Homes initiative. **The government admits we will not make our legally binding 4th and 5th carbon budgets, and we will fall far short of our EU legally binding renewable target.** Government policy is firmly pro nuclear (see below) and fracking. The government is proposing to start **fast-tracking applications for fracking** which, given the strength of public opposition is, as Jeremy Leggett describes, **'an assault on democracy'**. The government is still supporting off-shore wind, however, and it's heartening to note that we are trialling **12MW (that's mega!) wind turbines** in Scotland. **Scotland, which has just announced a target of 90% decarbonisation by 2050** (10% more than the UK as a whole) is also moving to **open up more seabed** for more off-shore wind (among many other positive initiatives).
4. It is now more than **18 months since parliament gave approval for the Swansea Lagoon but there has been no final decision from government** and it seems that private investors are now falling away. However, there is some good news on tidal stream (where there is no barrage but turbines sit on the seabed). The **MeyGen project off Scotland is now fully operating**, and **Nova** off Shetland has been granted **a seabed extension**. A **new report from the tidal industry** is calling for supportive policies from government for what could be a major export industry as well as significant clean domestic generation.

Research into wave power continues and engineering firm **Arup has now been commissioned to look at large scale generation in Scotland**. Interesting to read that the Canaries which, like most island nations, has a shortage of clean water and lots of waves is now **investing in wave power specifically to support the energy-intensive desalination of water**.

5. The main reason the UK will not make its 4th and 5th carbon budgets is because of lack of progress in our transport and heating. **Hydrogen is a possible partial solution to both, and it's squeaky clean if we can use excess renewables (night time wind, sunny-day solar etc) to electrolyse water** and split hydrogen from the oxygen (a great waste product). This is called Power to Gas (P2G). It is possible that this hydrogen could be used for inter-seasonal storage (taking low-value excess summer power and turning it into high value winter heating) by - confusingly - adding waste carbon (from industry) to convert it into storable methane. See **here for a better explanation**.

The **Institute of Mechanical Engineers is now calling on the government** and related industries to support this technology. **Keele University is currently trialling 20% hydrogen in their gas grid**, and the IME is calling for this to be across the UK **by 2023**. However, there is an alternative source of hydrogen which is to **crack methane, leaving carbon as a waste product which then needs to be stored or used productively**. This is being promoted, unashamedly

(!), to keep the gas industry in business. You can read about some plans [here](#). As I've written before, Shell is (surprisingly) backing *clean* hydrogen as a transport fuel, and hydrogen is now being considered as a [viable alternative to electrification of our railways](#). We even has some [nifty little hydrogen cars](#) being produced in mid-Wales.

6. Whatever you think of Brexit, the UK does face the **immediate problem that we have to leave Euratom** because we have said we will not accept the jurisdiction of the European Court of Justice (ECJ). Euratom regulates the nuclear industry and it seems likely that we are going to face a significant shortfall in qualified personnel as well as systems. [The Lords have now raised this as a serious issue](#).

The proposed nuclear plants for the Isle of Anglesey and for Moorside (next to Sellafield) are both waiting to hear whether the government will commit taxpayer funds to help build them (which means we take on the substantial practical and financial risks) . Here is a [Greenpeace petition](#) you may want to sign, and another to [oppose mining close to sensitive nuclear installations](#).

7. At my talks I have always encouraged everyone to **switch to a 100% renewable tariff** - and I still do! But the market has changed recently as we have developed more off-shore wind and the Big 6 often buy renewable power simply because it's the cheapest, not because they are interested in the Renewable Energy Guarantees of Origin. This has **created a secondary market for the 'green' certificates and energy companies can buy these REGOs for very little - I'm told as low as 0.00025p/kWh. This raises the possibility that some green providers are buying cheap 'brown power', covering it with inexpensive REGOs and charging a premium.**

I have written to the major green energy suppliers and **I can confirm that Bristol Energy Company, Green Energy UK, Tonik and Good Energy all state they have genuine relationships with their suppliers and know where all their energy comes from.** However, Bulb could not confirm the percentage and I got no reply from Ovo (despite repeated attempts). Ecotricity confirmed that **only 20%** of their power comes from known suppliers with attached REGOs.

Obviously we buy renewable energy to incentivise more renewable energy production, but that probably isn't happening where companies are just buying cheap REGOs. However, you may consider that some of their other green initiatives mean that your support is still worthwhile (Ecotricity's Green Gas Mills, Ovo's vehicle-to-grid). I will leave this to you but am happy to discuss.

8. [Cape Town has narrowly missed running out of water](#) but supply is becoming a [big issue around the world](#). Even in the UK we are being told [shortages are likely by 2050](#). A lot of water is used in irrigation. I was horrified to read that [1kg of avocados takes 2000 litres of water](#), causing major problems in drought-stricken Chile. This is just another reason to eat seasonal and local. Apart from all else, we now have a £22.5bn trade deficit in food...

Remember to try some English wine this coming week (it's [English Wine Week](#))! Failing that, **try some local, organic cider or beer**. Our apple producers need support. Generally they are forced to sell to supermarkets and **if the apples aren't quite the right shape or colour, whole crops can be discarded...** Ideal for juicing!

9. What we do in the UK is important - **but all eyes on the Global South and their likely increase in use of commercial fuels**. Helping them **leap-frog fossil fuels** is essential - and transferring funds is one of the major sticking points in the Paris climate agreement. Interestingly a [recent study](#) found many families in Africa prefer simple stand-alone schemes to micro-grids, as these give them a greater sense of ownership and control.

[SolarAid](#) has been a pioneer in getting off-grid solar to several countries in Africa. They now have a [new initiative which allows families to have central lights, switches and wiring installed and own a battery](#) that they can charge up at a central village charging point. This makes sense to me. **If you are looking for a project to support, or have carbon sins to offset, this looks like a really worthwhile candidate.**

10. As ever, there are many events and initiatives going on in Bristol. Here are just a few:

- Redland Energy Group are hosting a [talk on May 30th at 7.30pm](#) on community energy, smart meters and smart homes. This is a chance to find out more about where the latest tech is taking us, and how our appliances might be connected to the internet to help us use electricity more efficiently. The talk is at the United Reformed Church, BS6 6SA;
- There will be a talk at Waterstones, Union St, on 18th June, 7pm, by Martin Dorey on 'No More Plastic';
- There is a new ['West of England Energy Game'](#) that you can play on July 11th, 6pm - 8.30pm. The aim is to help you as a citizen and consumer understand better the challenges around energy management;
- [Bristol has a City Leap initiative](#) which you are invited to comment on by 31st August. This is all about how we move forwards as a city towards decarbonisation;
- Now is the time to think about insulation before next winter! It's worth putting your name down for a [thermal imaging survey with CHEESE](#) to check where your leaks and draughts are. Last winter they did 91 surveys, 37 of them for free;
- There is a new Bristol / Bath initiative to set up a 'one-stop shop' website for all information on things green - [One Home](#). This is still in its early days but I know the woman behind it, Angela, would greatly appreciate interest and feedback.

All good wishes. Feedback always welcome. Many thanks.

Nikki