20 07 2018

Hi

Here's some news with lots more positive stuff. Every day I read of substantial moves in our fossil fuel industries, in finance and in renewables. At the Plan B Earth court case in London (we're still waiting a verdict,) it was strangely **reassuring to hear the judge himself say 'Well, we are talking about an *existential* crisis, aren't we?' and the government's legal team agreeing. The seriousness of climate change is no longer a matter of dispute although there still seems a huge lack of awareness of how little time we have to act.** As Lord Deben, Chair of the Committee on Climate Change said last week, **we are facing something comparable to the Black Death** - but this time we know what is causing it and who is responsible.

But here's some mostly-good news....

1. Our solar is doing great (unsurprisingly) and **electric windows are here!**
2. Only 6 coal plants left to go....
3. **New Biological Energy with Carbon Capture and Storage at Drax power plant**
4. A possible **new interconnector** with Germany - good or bad?
5. Good news from Europe
6. **More big steps for Big Oil**
7. Can we leave this to our corporations? **Industry produces 50% of the world's greenhouse gases.**
8. **More good news on electric vehicle charging** - but Tory backbenchers block vehicle fuel duty rise
9. **The National Infrastructure Committee says no new pipeline of nuclear plants**

1. It will be no surprise that the **UK's solar has contributed really significant amounts** during the recent heatwave, even becoming the **leading source for a short period one weekend.** Here's an **excellent easy-to-follow presentation from Jeremy Leggett,** charting the ups and downs in the solar roll-out over the last 15 years, and a look at where things could go from here. **A big boost could come from electric windows (clear glass that generates electricity)** - they are finally here, British made and commercially viable. This *could* be wonderfully disruptive!

2. **New records have also been set in our coal decline.** It is only two years since we had our first hour without coal *since the 1880s;* last year saw **our first coal-free day**, and this year we have had **a thousand hours without coal, including three days in a row..**. Two more coal plants are scheduled to close this year, leaving us with **only six to shut down before our 2025 deadline**. However, some coal capacity is likely to **remain on standby for winter emergencies** and the fact that **several companies are**

fighting to open up new coal mines seems to indicate that they don't believe this is the end.... (See point 4)

3. The good news is that our use of **bio-energy**, principally wood burning at **Drax,** was down last winter. Drax provides around 7% of the UK's electricity and has been converting its six coal plants to four biomass over the last few years and the remaining two will go to gas in the 2020s. The company is starting a **new trial in carbon capture and storage** from one of its wood-burning plants but its claims are worrying. The website states that **'if successful, [this] could make the renewable energy produced at its North Yorkshire power plant carbon negative'.** There are many questions to be asked here. Carbon will be stored on site and, according to **this article**, then sold for industrial purposes which means it will only be 'captured' if it is used for some very long-term storage (such as building materials). Drax imports wood from North America where forest is often clear-felled to produce pellets. There is no obligatory replanting scheme and we do not count the emissions from deforestation, transport, or even the burning of biomass in our emissions figures. The idea that burning wood and using the carbon in industrial processes or storing it (BECCS, Biological Energy with Carbon Capture and Storage) is carbon negative is highly misleading. As climate scientist **Kevin Anderson says,** **'..the sheer scale of the BECCS assumption underpinning the [Paris] agreement is breathtaking'.** I have emailed Drax's media office with a polite request asking for clarification on their 'carbon negative' claim. A reply came back immediately asking who I was, so that they could 'tailor' their answer. I replied immediately - no subsequent response from
them.

4. The UK is **discussing a new interconnector**, **this one to Germany.** We already have **four**, linking us to Ireland, Northern Ireland, Denmark and France. Another **seven are under construction,** **all to be completed between 2019 and 2022**, including one through the Eurostar tunnel, one to Norway and one to Belgium. **These are all two-way,** so we can sell electricity to other countries as well as buy, with the benefits that this can bring more **security of supply and a levelling out of electricity prices (though Brexit may provide challenges if we are outside the Energy Market**). Although this flexibility in our electricity market is undoubtedly a good thing, as this **report explains,** there are some concerns. It seems the **French reliance on electricity for heating helped fire up our own coal plants last winter, as French demand - and prices - went up with the freezing weather.** Having received UK 'capacity market' payments to stay on line for any UK emergency, it seems these power companies fired up our coal plants and benefitted from exports to another country. Perhaps **a bigger concern** is that countries such as Germany, that routinely rely on **very dirty lignite coal for almost 40% of their power production**, **will continue to produce cheap brown power for export, and this could even undermine new renewable generation here....**

5. **Some good news from Europe.** **Spain got almost 46% of its power from renewables in the first six months of this year,** and **France is pushing ahead with more solar and wind** in its attempt to **reduce its nuclear dependency from 70 to 50%,** **possibly**

by 2025. French oil company Total is planning to spend 5% of its capital budget on solar in France and **EDF is planning to double its renewable generation by 2030** (not just in France). If you go to Paris, you may see these **extraordinary tree-shaped wind turbines.** Even Russia, **which has hardly any renewable power, and is the 4th biggest country contributor to CO2 emissions, is now having to clean up, as air quality and reputational risk become real issues. The pressure is coming from institutional investors (pension funds, insurers etc) that are demanding higher environmental standards - fantastic news!** The really BIG news this week was that **Ireland has taken an extraordinary lead,** saying it's national savings fund will divest from any company that gets more than **20% of its revenue from oil, gas, coal or peat.** Norway, which has the world's biggest sovereign wealth fund (built on oil revenues) has been **divesting from companies with 30% revenue or more from coal.** It has not yet committed to divesting from oil and gas companies.

6. Pressure on our oil and gas companies continues. As one spokesperson says **here, 'For a company it is no longer relevant whether you believe in climate change or not..... The leadership of most companies have realised they had better get on board'.** The Norwegian oil company Statoil has recently rebranded itself as **Equinor** and shockingly (in a positive way!) Shell has announced it is no longer an oil and gas company, but a **'transition company'.** Vitol, that trades around 7% of the world's oil, has announced it will be **investing in European wind farms.** It is clear that they all understand the threats from the energy transition we are in - but rebranding and small stakes in renewables do not *yet* put them in the league of the **Danish Oil and Gas company that has made a complete transition to renewables** (**now known as Orsted** and responsible for many of the UK's wind farms). But great to read that **oil companies are having increasing difficulties at board level signing off 20 - 25 year large-scale investments**. The future for oil and gas looks like one of managed decline.

7. **To a large extent we are in the hands of our big corporations - global industry is responsible for around 50% of the world's greenhouse gases.** Big companies have the **ability to raise the massive amounts of capital needed for really major clean-tech investments,** *and* they can change political and popular culture. It was great to read, therefore, **one survey that found that 50% of engaged companies expect their products and services to be low-carbon by 2028.** Of course it's not enough, and the devil will be in the detail, and it raises the whole question of green growth versus no growth future economy. But in the short term it's a sign of how corporations are waking up to the very real physical and reputational threats to their business models. **Apple took the limelight this week by announcing $300 million of investment** to help ensure its supply chain is truly green. Behind all this is consumer power. **When we buy (or don't buy), and when we invest, we vote** and companies live in fear of that Kodak moment, the Hero-to-Zero transition that can happen incredibly fast.

8. Although there is a rapid expansion in the number of electric vehicles on our roads, it seems that the lack of accessible charging points is still a major brake on UK take-up. This month there have been several bits of good news on this front. **Vattenfall is planning a roll out of chargers, open to all, later this year**, and **BP is focussing on an 'ultra-fast' network to start within the year.** A company called **Gridserve says it plans to do for charging what Amazon has done for shopping**, and **Pivot Power is planning a rollout of batteries around the south to help with grid balancing but also to serve as out-of-town charging points.** Dundee has just got the **UK's first solar fed charging infrastructure.**

   The government has also announced its 'Road to Zero' programme, which aims at **half of *new* cars and 40% of new vans being low-carbon emission by 2030,** and new housing developments will have to install charging points. There is a **mixed response from industry to the government's plan** including disappointment (read frustration) that the government is not bringing forward its 2040 ban on sales of fossil fuel vehicles. **Since 2011, fuel duty on diesel and petrol has been frozen (costing us $6bn a year since 2011 in missed payments to the Exchequer) and Treasury plans to in-freeze are being blocked by a very small group of Tory back-benchers** - and we know they hold a lot of power these days... Several UK cities are getting electric buses but where services are privatised, as in Bristol, this is unlikely while the government continues to give out **generous subsidies for diesel and gas buses.** (The bus lobby at Westminster is very strong, I'm told.) The good (but not enough) news is that, as the Express puts it, the National Grid expects **UK roads to be 'flooded' with 11 million EVs by 2030 and 36 million by 2040.** New charging infrastructure will bring this on - but proper taxation of fossil fuels would also help enormously.

9. The National Infrastructure Committee has this month **recommended that the government shelve its roll-out of new nuclear** plants and **advises putting the money into renewables, efficiency and storage to achieve the same results, faster**. **Here's** a really good article from a veteran of the nuclear industry, explaining why - just in terms of timescales - nuclear no longer makes sense. It's worth noting that Flamanville (on which Hinkley is based) has recently **discovered more welding problems:** Flamanville was supposed to be up and running in 2012...

   Despite all the positive news above, I write this email with a level of..... fear. I share Lord Deben's sense that climate chaos is now here and we may be losing control. We are now **adding 2 -3 parts per million of CO2 per year,** 450 is considered the level at which we reach 2 degrees of warming and this year we peaked at 412.2 ppm. **This article gives a succinct update** on where we are and a link to the Carbon Countdown Clock. Of course there are many different natural variations that impact the figures but the rise in CO2 is relentless. (Our pre-industrial level was 280 ppm.) **Climate**

Scientists, economists and energy systems modellers are feeding into the IPCC reporting system, having modelled five different 'socioeconomic pathways' for the future, ranging from our current gradual move towards decarbonisation through to a complete sticking with fossil fuels. **Their *best*-case scenario is that we *only* get to three degrees by 2100...**

Apologies for ending on a fearful note. All good wishes. As ever, if you wish to come off the mailing list, just let me know.

Nikki