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Sustainable Blewbury

www.sustainable-blewbury.org.uk

July/August 2018

For the latest news and more information, please see our website

Sustainable Blewbury news

Apple juicing

Our 2018 ***apple juicing sessions at Blewbury Manor stable*** are scheduled for the Sundays listed below. If your apples are much earlier and won't keep, or you have too many for our sessions, you can ***hire*** our equipment at very reasonable cost. Contact us at: info@sustainable-blewbury.org.uk.

- ***26 August: 2–4 pm***
- ***9 September: 2–4 pm***
- ***23 September: 2–4 pm***
- ***7 October: 2–4 pm***
- ***21 October: 2–4 pm*** *(Apple Day!)*
- **4 November: *11am–1 pm*** *(if sufficient demand)*

Note: If you wish to pasteurise your juice (so it will last for up to a year) it takes quite a long time so ***please arrive early in the session***.

Sustainable Blewbury 25th anniversary celebration, 30 September, Blewbury School

Our 25th year – the BVS Environment Group began in August 1993.We'll be celebrating with an exhibition of 25 of our successes in 25 years. We're still planning it, but it will be more than an exhibition – the Blewbury Wagon will be there, there will be a barbeque, things for children to do, etc. More in the September Bulletin and newsletter. If you have memories or photos you would like to share, particularly from before 2009, please contact Jo Lakeland at 01235 850490.

Dates for your diary – two talks at Blewbury Manor barn

Monday, 24 September, 8.00 pm: *'The future of transport and transportation'*, by Scott Witchalls (Peter Brett Associates LLP)

Monday, 15 October, 8.00 pm: *'Adventures at the top and bottom of the world - some personal perspectives'*, by Mark Blythe

Interesting links – disappointing decisions

The tides – energy from the moon

The proposal for a tidal lagoon in Swansea Bay was recently rejected by the government, on the grounds that it would be too expensive and not competitive with the government's favourite renewable energy source, offshore wind. But the Swansea Bay project was meant to be a first, for learning how to optimise and reduce the cost of tidal energy, which unlike wind or solar is entirely predictable. If the same approach had been applied to offshore wind or solar in their early days they would never have become so much better and cheaper than when they started out.

Despite this setback in the UK, the world tidal energy scene is bubbling with new approaches. Some are already being tried on larger scales while others are more speculative. Overall, the field looks very promising. See bit.ly/2MNyNgC for more explanation.

Open Cast Coal Mining: why is a new coal mine starting up in the UK?

The UK has made a world-leading pledge to phase out all coal-generated electricity by 2025. Our coal-fired power stations are closing down and coal use has fallen by more than 80% since 2012. In 2017 coal produced only 6.7% of our electricity. (Renewables generated 29.4%, gas 39.7% and nuclear 20.9%.)

Despite this, a new opencast coal mine is starting up in the Derwent Valley, County Durham. Previous attempts to mine the valley were rejected by the Durham County Council in 1974, 1986 and 2011. A proposed opencast mine, at nearby Druridge Bay in Northumberland, was stopped earlier this year on grounds of environmental damage when Sajid Javid was Communities Secretary. (Friends of the Earth's comments about this are at bit.ly/2v0Mkev). However, Javid's replacement, James Brokenshire, has refused to stop this one. The topsoil and subsoil are now being scraped away (photo) to prepare for the 50-metre deep excavation. For more information see bit.ly/2Lh1RB2.

Fracking: why is our government now encouraging fracking for shale gas?

On the last day of parliament before the summer recess, the government gave the final go-ahead to allow fracking (short for hydraulic fracturing[1]) at a Lancashire site, in spite of Lancashire County Council having refused applications by the energy firm Cuadrilla for permission to drill for shale gas at two sites in the county.

Cuadrilla was given permission to begin fracking at its Preston New Road site (near the M55, about 4 km from Blackpool Airport) after the Minister of State for Energy and Clean Growth, Claire Perry, said she was satisfied the company had met all the necessary requirements for a permit. Over 150 protesters were outside the five-week long official inquiry, and anti-fracking protests have been held regularly at the site. Six protesters were arrested recently for blocking the entrance to the site. See bbc.in/2LmGOgF.

It is the first time permission has been granted since a new regulatory regime was introduced, and could see the first gas extraction since exploratory drilling caused two minor earthquakes at a site nearby. Fracking has been banned or suspended in Scotland, Wales and Northern Ireland, leaving England as the only UK country where it remains an option. The government has also announced proposals to fast-track fracking. For more information see ind.pn/2JT3RtO.

Anti-fracking protesters being arrested at the Preston New Road site

Transformation of Drax power station: coal to biomass

By Jo Lakeland

I must start this article by saying that I believe it is immensely important that every country reduces its fossil fuel emissions as much and as soon as possible. But I also think that it should be done openly, using methods that are based on accurate research, with minimum pollution and loss of biodiversity, and not for maximum financial gain for the people involved. The article is the result of exploring many online sources, hopefully reliable ones.

The most recent of our series of talks at Blewbury Manor was in March this year. Dr. Catherine Long talked about her work supporting local communities and indigenous peoples in Africa and Latin America to secure their rights to control and manage forests, and to engage in global debates on climate change and other issues that affect their lives directly, *including deforestation and its causes*. At the conclusion of her talk Catherine remarked that she had recently become aware that forests in

[1] Hydraulic fracturing: liquid is pumped at high pressure deep underground to fracture rock and release shale gas or oil.

Louisiana, USA were shrinking rapidly because they were being cut down for timber, and that when she investigated the cause of this, she discovered that much of this timber is being turned into wood pellets and shipped across the Atlantic to fuel Drax power station in Yorkshire! This was fascinating; I had to find out more about it.

Drax Power Station (Anna Gowthorpe/PA)

Drax is the UK's largest power station, producing 7% of our electricity, and four of its six generators now burn biomass instead of coal.

Drax has also begun a trial of carbon capture technology that will isolate the carbon in its emissions and capture it to be stored or reused in other processes. The trial is a pioneering form of Bio-energy with Carbon Capture and Storage (BECCS), to cut emissions from one of its four biomass-burning units. In theory, BECCS can actually *reduce* greenhouse gases in the atmosphere, as the trees for the power station absorb carbon dioxide as they grow, while the carbon dioxide released from generating electricity does not enter the atmosphere, thus making it a 'negative energy' technology. Read more at bit.ly/2rZT8qr.

This all sounds very hopeful, but critics say that biomass power generation causes deforestation and damages ecosystems. And are we really shipping timber across the Atlantic just to burn it?

I started by working through the Drax website, www.drax.com. It is well designed, well written and full of well explained information: *very* impressive. I recommend looking around it[2].

Much of Drax is like a standard modern fossil fuel power station, but there is one huge difference: four 65m-high biomass storage domes, which between them hold approximately 300,000 tonnes of compressed wood pellets, enough to power Leeds, Manchester, Sheffield and Liverpool for more than 12 days. Which sounds excellent: the problem with electricity from wind and solar is that they are both weather dependent, whereas large-scale biomass can provide exactly the amount of energy needed and also store biofuel for future use.

Two of the four 65m-high storage domes for wood pellets

The fuel for Drax is pelletised before being shipped to the UK, about 20,000 tonnes per day. Which is a lot of trees! 59% of the pelleted feedstock for Drax comes from the USA, 25% from Canada and 16% from Europe, but *only 0.7% comes from the UK*. In summary, Drax is the largest user of imported wood pellets in the UK, its needs are growing fast and the UK, in turn, is the largest importer of wood pellets in the world. And nearly 60% of these pellets come from a single source, the USA.

It is a complicated process to get all those pellets to the UK. They are shipped by train 280 miles to Greater Baton Rouge, where they are loaded onto huge ships capable of carrying 800,000 tonnes 200 miles down the Mississippi to the sea and then 19 days across the Atlantic to British ports. They then finish their journey to Drax, near Selby in Yorkshire, in specially designed wagons, the biggest ever to travel on British railways. Fourteen trains arrive every day, carrying the 20,000 tonnes of biomass needed to fuel Drax. The most significant greenhouse gas (GHG) impacts in the biomass supply chain are the electricity used in pelletisation and the sea-freight emissions in transport. Surely we should be using sources of energy closer to home such as offshore wind, or tidal energy (which is also available 365 days/year)?

We are now getting back to the original question: what is happening to the forests of the southern United States? The Drax website says that a large proportion of the wood that is being pelleted is unsuitable for much else: it is bark, thinnings (often very small trees), small branches and other residues, leaving the solid wood to be used for other things.

[2] All statistics and illustrations come from the Drax website unless labelled as from a different source.

Drax wood-pelleting plant at Morehouse, Louisiana

Drax describes how the forests they are cutting are being managed sustainably, i.e. there is more growth than is being harvested, and trees are being replaced, but *not* on a 'like for like' basis. The forests being cut down are often ancient hardwoods, often replaced by conifer plantations, resulting in an enormous loss of biodiversity and ecosystem damage.

The basis of EU regulations on carbon dioxide (CO_2) emissions from biomass plants and power stations is that the CO_2 should be ignored because it will be reabsorbed by the young trees planted to replace the burned ones. This is the reason for the huge interest in large-scale burning of biomass by EU countries: it is a relatively easy way to fulfil their fossil fuel obligations. Read more about this at bit.ly/2OHqiFF, an investigation by CarbonBrief: 'Does the UK's biomass burning help solve climate change?' It is two years old, but the reasoning is still valid.

The UK must reduce its carbon emissions *very soon*. But if we burn timber the CO_2 goes into the atmosphere instantly and it takes decades to a century for replacement young trees to reabsorb that CO_2. So this only helps in the long term. And Drax burning biomass is supposed to be a major part of the UK's programme to meet its clean energy obligations.

In addition, there are questions raised about particulate pollution from Drax. A report in July 2017 by Biofuelwatch (bit.ly/2LOSdpz) says that the emissions of PM10, small particles which are known to affect health, have increased by 135% since 2008, and this is correlated with the conversion to biomass burning.

There have also been objections by local Louisiana residents and environmental organisations to the pollution, emission-testing regime and fire risk of Drax's three wood-pellet plants in Louisiana. A letter addressed to the Governor of Louisiana in April 2018 (published on the internet as a pdf file https://bit.ly/2ncWrbN) from a group of environmental organisations demands that Louisiana must eliminate existing air pollution, improve emissions requirements, address the history of many pollution-creating fires at wood pellet plants, and be more specific in the permits issued to future wood pellet mills.

A final observation by Dr Phillip Williamson of the University of East Anglia: *'In the middle of the 19th century, wood burning rose to such levels that Western Europe was almost completely deforested. Ironically, the rise of coal burning saved the situation. Now that coal is being phased out, it should not be an excuse to return to widespread tree burning, say researchers. Instead we should concentrate our efforts to boost solar and wind projects and other less harmful sources of renewable energy.'*

We would welcome your comments on this article. Were you aware that the UK is using Louisiana forests to produce wood pellets? Is it ethical? What should we be doing instead to meet our renewables obligations? What is your solution?
Please email your comments to info@sustainable-blewbury.org.uk by the end of August. We would like to include some in our September newsletter.

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We have a substantial programme of activities in and around the village. Getting involved is fun and can make a very positive contribution to village life and local environment. If you'd like to get involved in what we do, or to receive our free Newsletter, email us at info@sustainable-blewbury.org.uk or phone John Ogden at 01235 850372.