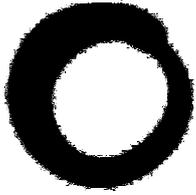


Number
85

Spring
2016

Welcome to Nottingham Friends of the Earth. We are one of around 250 local Friends of the Earth groups campaigning for a better environment locally as well as nationally and internationally. **Friends of the Earth** has a reputation for effective campaigns backed up by authoritative research.

A symbol of optimism



Nottingham
Friends of
the Earth

NOTTINGHAM FRIENDS OF THE EARTH

Down to Earth



This 2.5MW wind turbine at Stoke Bardolph, Gedling, makes an impressive and elegant sight on the Trent valley skyline.

Installed and commissioned in November 2015, it is the second wind turbine approved by Gedling Borough Council (GBC), and supported by Nottingham FoE. The gentle movement of the rotor offers an inkling of hope for a green energy future.

GBC has shown its continued support for wind energy by approving in October 2015 a 1.5MW turbine at Newstead and Annesley Country Park.

INSIDE THIS ISSUE

Nottingham Bee Summit • UK energy mix • Air pollution • Fossil fuel divestment • Paris climate change talks • Fracking in Notts



Greater Nottingham Bee Summit

Following pressure and campaigning by interested parties and environmental groups including Friends of the Earth, in 2013 the EU introduced a temporary ban on the use of some neonicotinoid pesticides because of the risk they present to bees. Scientific research has indicated there to be a link between declining bee populations and the use of these pesticides.

In October 2015, Nottingham Friends of the Earth organised a Bee Summit. The purpose of this was to bring together organisations from multiple sectors to hear from key speakers about declining bee populations and come up with ideas for how action can be taken in Nottingham. There is the potential to improve and create more bee habitats in the city – allotments, parks, wooded areas etc.

People from a number of organisations attended the Summit, including the National Farmers Union, Nottingham in Bloom and Greenpeace. At the end of the Summit, pledges were made by each organisation to take away an action.

A Google group has now been formed for organisations and businesses, and the group will meet up every 6 months to discuss progress on their pledges and ways of working together. If you are a member of a local organisation and would like to get involved, please contact Greg Hewitt for details.

Greg Hewitt

The UK's energy mix – puzzles within puzzles

British power generation uses a mix of imported coal, natural gas, nuclear and renewables. As ageing nuclear power stations face decommissioning, new facilities including Hinkley Point C, Somerset, are to replace them. This newest station is estimated as the UK's most expensive object. It faces criticism from some engineers, exemplified by Dr Fred Starr, C Eng, FIMMM writing in Materials World magazine (Dec & Jan): 'My concern is that Hinkley Point C is being built as a cheap and cheerful (even if it doesn't sound this way) base load generating system, with simplified controls and with insufficient meat in components to cater for the wear and tear of daily load changes. In this scenario, nuclear could never take on much more than 30% of the UK power requirements. So for the indefinite future we will be stuck with combined cycle gas turbines and coal to meet changes in demand, with all the CO₂ emissions that this

implies. In short, is a technically incompetent, panic-stricken government being sold a pup?'

When recently the last UK deep mine colliery closed, the plan was restated for gas-firing progressively to increase as a proportion of total electricity production. It's well known that natural gas, ie methane, can be produced in several ways. It is also generally understood to be cleaner than coal or oil. The US Energy Information Agency's 1999 report on CO₂ emissions for energy generation quotes an emission factor of 0.963 kg CO₂ per kilowatt hour for coal power, and 0.881 kg CO₂/kWh for oil. Methane scores lower still at 0.569 kg CO₂/kWh. Methane burns to produce an identical amount of CO₂ in molecular terms, but weighing 2.75 times as much.

Methane is non-toxic, but it is a pollutant by contributing to climate change. This is

especially so if it is released unburnt, since its global warming potential is known to be considerably higher than CO₂. As it gradually breaks down in the atmosphere, and does so more quickly than the absorption of CO₂, its potential is higher the shorter the time period over which it is assessed. The factor has been revised upwards with research: in 2000 it was rated as 21 times worse (100 year period) and 63 times worse (20 yrs). The currently accepted Intergovernmental Panel on Climate Change factors are 34 (100 yrs) and 72 (20 yrs).

The issue of methane in the atmosphere is clearly important no matter what source, whether a by-product of energy industries, agricultural techniques or wholly natural

processes. Natural gas leakage rates in USA, for example, were recently reckoned at about 5% of production, but infra-red satellite measurements suggested a figure nearer 9%. The IPCC data suggests that a small percentage wastage of gas production could add significant warming effect. Although it would be rash and inappropriate to attempt definitive calculation here, it is clear that all natural gas industries have a formidable responsibility to minimise wastage. If the irreducible minimum wastage should prove inadequate, certain methane production methods, no matter how economically attractive, may be unsustainable.

Jeremy Jago

Why no urgency on air pollution?

Back in 2014, an activist legal group called Client Earth won a case in the European Court of Justice ordering the UK to take action to cut pollution levels.

Figures were released suggesting that particulates could be killing 29,000 people every year in the UK, including 150 in Nottingham City and a further 430 in the County (see Down to Earth No 84, Spring 2015). The government has since estimated a further 23,500 deaths per year from nitrogen dioxide. Most of this deadly pollution is caused by traffic.

So, what happened in 2015? Not a lot! The UK Supreme Court ruled that the government must produce an Action Plan. The government eventually produced a Plan just before the end of 2015 – mainly requiring local authorities to do something in order to comply with legal limits by 2020 (limits originally set for 2010). Nottingham is one of the cities required to take further action. This could mean a Clean Air Zone with restrictions on traffic. It should be recognised that Nottingham City Council has taken a number of measures, though more is needed:

- workplace parking levy to reduce commuter cars coming into the city
- extending the tram network
- increasing the number of electric buses
- provision of charging points for electric vehicles
- funding for a go ultra low strategy,

including:

- city centre low emission zone with restrictions on HGVs, buses, coaches, taxis
- more charging hubs

(see

www.nottinghamcity.gov.uk/golownottm)

The role of air pollution in tackling climate change

The main greenhouse gas causing climate change is carbon dioxide – mainly from burning fossil fuels – which is a very long lasting gas.

But there are also a number of other emissions causing climate change which are shorter lived. This includes black carbon (particulates), methane and hydrofluorocarbons.

It has been estimated that tackling these emissions could reduce global warming by 0.6 degrees – a significant contribution to keeping global temperatures less than 2 degrees above pre-industrial levels. This could be done more quickly and at less cost than needed to make the same reductions from carbon dioxide, and using established technology.

Reducing emissions from traffic can help to reduce climate change as well as improving the air we breathe.

Nigel Lee

Why should pension funds divest from fossil fuels?

When people invest in a pension they are looking to secure a reliable income during their retirement. They are investing for the long term.

The problem with fossil fuels like coal, gas and oil is that burning them adds carbon dioxide to the atmosphere and causes climate change.

To keep global warming below a 2 degree increase above pre-industrial temperatures it will be necessary to leave more than two thirds of known reserves in the ground. But these reserves have been included as assets on the fossil fuel company balance sheets. If they can't be burnt their value will have to be written down. So, far from security in old age, investing in these companies will be like flushing money down the toilet.

The problem is being recognised in financial circles. In March 2015, Bank of England Director Paul Fisher warned the financial sector of this problem of 'stranded assets'. So Nottingham Friends of the Earth wrote to Nottinghamshire Pension Fund asking how they would respond. The answer was basically that Mr Fisher was just giving his personal opinion to the insurance sector – so they had ignored his warning!

Then we did some more detailed research to put some questions at the Annual Meeting of the Notts Fund in October 2015.

Notts Pension Fund has £4bn invested on behalf of 114,000 members. It is managed by the County Council but includes employees of the City Council, District Councils, educational institutions and the voluntary sector.

We found that, as at March 2015, over £250 million of the Fund was invested in the world's biggest fossil fuel companies including Shell, BP, BG and coal companies Rio Tinto and

BHP Billiton. All of these lost around 20% of share value or more in the previous year – the Fund actually increased its share holding in many of them!

Why? – because they think that by owning shares they can 'engage' with these companies' ethical policies. But they aren't going to stop their core activity of extracting fossil fuels out of the ground.

Then in September 2015, just before the Fund's Annual Meeting, Bank of England Governor Mark Carney warned that over two thirds of proven resources of oil, gas and coal as "literally unburnable". He also said "...financing the de-carbonisation of our economy is a major opportunity for ... long-term investors. It implies a sweeping reallocation of resources and a technological revolution..."

So, if Mark Carney gets it, why can't Notts Pension Fund reallocate their funds to things such as energy efficient social housing to tackle homelessness and fuel poverty?

Already a number of pension funds have agreed to divest. Haringey Council's Pensions Committee is shifting one third of its equity funds into a Low Carbon Fund, and will get out of coal completely. The Environment Agency's Pension Fund will divest 90% of its coal company shares and 50% of oil and gas by 2020.

Meanwhile, Notts Pension Fund has continued to lose £millions on its fossil fuel stocks.

For information on the local campaign see: www.foe.co.uk/nottingham For national information: www.foe.co.uk/go/divestment and www.gofossilfree.org/uk

Nigel Lee

Climate campaign after Paris

The good news is that the world's governments came together in Paris in December 2015 to agree that global temperature rise should be kept well below 2°C above pre-industrial levels and will aim to further limit the increase to 1.5°C.

The bad news is that action which has been pledged by those governments falls well below

what is needed. And there is no mechanism to ensure that even this is achieved.

The deal makes clear that the fossil fuel industry has had its day. But we will have to keep up the pressure on politicians to ensure that fossil fuels are consigned to the dustbin of history.

Following the Paris conference, a UK activist conference was held in London in January (Climate Rising – supported by Friends of the Earth, This Changes Everything and PCS Union). In Nottingham, Trent University held a roundtable discussion with politicians and local campaign groups.

A This Changes Nottingham group has been set up to promote local action on climate change. This included showing the film This Changes Everything, based on Naomi Klein's book and featuring grass-roots campaigns around the world against fossil fuels.

Background

Since the industrial revolution, burning fossil fuels has already increased carbon dioxide in the atmosphere from 280ppm to 400ppm. That is increasing acidification of the oceans, threatening corals and shellfish, with a knock-on impact on other sea life.

And by 2014 global warming had already increased surface temperatures by $\frac{3}{4}^{\circ}\text{C}$ above the twentieth century average, before the current El Nino event which alters currents in the Pacific every few years, now causing a short term additional increase in temperature during 2015 and 2016.

We know that continuing business as usual is likely to increase average global temperatures by around 4°C above pre-industrial levels by 2050. Keeping below that means restricting carbon dioxide emissions as well as other greenhouse gases.

Because CO₂ is long lasting it will accumulate in the atmosphere. So there is a maximum carbon budget of how much can be burnt up to 2050. To keep within that budget we have to start cutting now. Reductions in the next ten years to 2025 are crucial. If we don't make deep cuts by 2020 there will have to be very drastic cuts in emissions from then on.

And we need to understand that climate change is already happening: deserts are expanding, glaciers and ice at the poles are thinning and retreating, sea levels are starting to rise. Droughts and floods are becoming more intense. Food production is already being affected, particularly in the Global South. The people who are least responsible are most likely to suffer. And that is a major driver of the movement of refugees in many parts of the world, provoking and exacerbating ethnic and religious conflict.

Paris

Although Paris agreed a global goal to hold the temperature rise to well below 2°C , they didn't agree sufficient action to achieve this. If all pledges by governments are delivered the most likely result is a 2.7°C increase. But that assumes a number of highly speculative ways of absorbing emissions – without them the likely rise would be 3.5°C (these figures are from Professor Alice Bows-Larkin of the Tyndall Centre, Manchester University). And there were a number of key issues excluded from the Paris agreement, including references to:

- the need to keep fossil fuels in the ground and decarbonise the global economy;
- international aviation and shipping;
- compensation for those suffering more than they have caused;
- where finance needed for developing countries to address climate change will come from;

and the pledges won't be reviewed until 2020. That means much more drastic action will be needed to cut carbon emissions in the 2020s than if we start to take more effective action now.

What needs to be done?

What we need to see now is:

- substantial cuts in fossil fuel use in all sectors;
- shifting investment to energy reduction and energy efficiency;
- investing in renewable energy.

How can we do this equitably? Clearly those advanced western economies that have done most of the polluting in the past need to make bigger cuts more quickly.

But we need to understand that re-directing the economy to tackle climate change can strengthen the economy and create more jobs.

As Lord Stern said in his Review of the Economics of Climate Change in 2006, it will be a lot more cost effective to tackle the causes of climate change now than to deal with the consequences later.

There is a campaign to create a million climate jobs. We should be building zero carbon homes for those in greatest need, retrofitting homes to combat fuel poverty, expanding public transport, investing in renewable energy including solar panels, wind turbines, wave, tidal power, etc. And developing the training and skills required to transfer people into these jobs.

Climate campaign (contd from page 5)

Government policy

Unfortunately, the current government is moving in the wrong direction – an Infrastructure Act and an Energy Bill aiming to maximise fossil fuel extraction. What ludicrous folly! And Ministers are doing everything they can to sabotage investment in solar, wind, etc – just as these technologies are achieving improvements in efficiency and falling costs which will probably make them the most cost effective options within a few years – if sufficient investment is put in now.

Friends of the Earth does not support any particular political party. We aim to build cross-party consensus on progressive policies. That is what we achieved with the Climate Change Act in 2008. But we are going to be critical of policies we disagree with. What we want to see from the government is serious long term policies to:

- reduce energy demand
- keep fossil fuels in the ground
- support investment in renewable energy
- give more support for energy-efficient homes and businesses
- and effective action to protect against flood risk

For information on This Changes Nottingham, contact 07940 952825 or email notts_thischangeseverything@yahoo.co.uk

Who wants to frack Notts?

Fracking in Nottinghamshire has moved a few steps closer.

- IGas has been given planning permission to drill boreholes to monitor groundwater at its proposed fracking site at Misson Springs, North Notts – agreed by Notts County Council in January 2016.
- IGas has applied for planning permission and an environmental permit for two exploratory boreholes 3,000 metres deep at Misson Springs – to be decided later in 2016 – and also says it wants to frack between Barnby Moor and Blyth, north of Retford.
- In 2015 the government granted 159 new petroleum licences which will allow fracking as well as conventional oil and gas wells – including 18 licence blocks at least partly in Notts, and a number of others in Derbyshire, South Yorkshire and Lincolnshire:
 - A large area around Sherwood Forest has been offered to Swiss chemical company Ineos.
 - Parts of the Nottingham-Derby Greenbelt have been licensed. The block between Derby and Long Eaton has been handed to Warwick Energy, run by a couple of chancers

whose previous company Independent Energy went into receivership in 2000. An area to the South West of Nottingham, between Bramcote and East Leake, has been given to US shale company Hutton Energy which already has permission to drill for conventional oil by the A52 near Saxondale

- Nottinghamshire County Council has refused to include a separate policy on unconventional hydrocarbons in the Notts Minerals Plan which will go out to further consultation in mid February 2016.

An estimate by the Institute of Directors (in 2013) said that to supply one third of UK gas needs by 2032 would require around 4,000 horizontally fracked shale gas wells. That could mean around 500 wells in Nottinghamshire – if we don't stop them.

Companies who want to frack Notts

- Ineos wants to frack the area around Sherwood Forest. It's licensed area covers around 1,000 square kilometres between Chesterfield and Ollerton and between Mansfield and Worksop. Ineos is a large chemical company which moved its head office to Switzerland to avoid UK taxes. It has a large refinery at Grangemouth in

Scotland which has been censured for health and safety failures and pollution incidents by both the Health & Safety Executive and the Scottish Environmental Protection Agency. It also has a notorious chemical complex at Runcorn.

- IGas has a number of licences in North Notts, South Yorks and North Lincs, as well as in North West England. It has had problems with dodgy debt financing, compounded by the falling oil price – most of its revenues come from small oil fields, including a number in Notts. IGas' fracking exploration is being bankrolled by French oil and gas companies Total and Engie (formerly known as GDF Suez). It also has a deal with Scottish Power to frack an area between Hatfield and Scunthorpe. When Total announced it was allocating £20m to IGas for exploration in North Notts, IGas' share price in January 2014 was nearly 150p – which has now collapsed to less than 20p. Rumours have been rife that if it collapses any further it could be bought out, possibly by Ineos.
- In South Notts, US shale company Hutton Energy recently bought into a number of existing licences which included permission to drill for conventional oil at Harlequin, near Saxondale. It now has new licences to frack around East Leake and Ruddington as well as parts of Beeston, Chilwell and Attenborough.
- Warwick Energy has been offered the licence block between Derby, Long Eaton and Stapleford. Its directors previously ran an energy supply company Independent Energy which was sued for securities fraud and went into receivership in 2000.
- Egdon Resources is a junior partner to IGas in North Notts and to Hutton Energy in South Notts. It has a number of small conventional oil wells. In addition, it is being bankrolled by Total for shale gas exploration North of Gainsborough in Lincolnshire.

There are a growing number of countries and regions which have declared moratoriums on fracking, including Scotland, Wales and France. The US State of New York banned high-volume hydraulic fracturing in June 2015 following a very detailed review of the available data. Concerned Health Professionals of New York is maintaining a Compendium of research relating to the environmental and social impacts of fracking, with the October 2015 edition reporting the following emerging trends:

- (1) regulations are not capable of preventing harm
- (2) fracking threatens drinking water
- (3) emissions contribute to toxic air pollution and smog (ground-level ozone)
- (4) public health problems, including occupational health and safety, are increasingly well documented
- (5) natural gas is a bigger threat to the climate than previously believed
- (6) earthquakes are a consequence in many locations
- (7) fracking infrastructure poses serious potential exposure risks
- (8) exposure to 'naturally occurring radioactive materials' is a risk for both workers and residents
- (9) risks in California could be affecting food crops
- (10) economic instabilities of fracking further exacerbate public health risks

There are a growing number of anti-fracking groups around the UK. In North Notts, Misson Community Action Group is supported by Bassetlaw Against Fracking, Frack Free Notts, Frack Free South Yorkshire, Frack Free Isle (North Lincs) and Frack Free Lincs. Elsewhere in Notts, campaign groups are developing in East Leake, Broxtowe, Shireoaks and Edwinstowe.

For further information see frackfreenotts.org.uk

Nigel Lee

Contacts

Co-ordinator: Jeremy Jago (c/o Sumac Centre, address as below)
Membership Officer: Nigel Lee, 0115 9788059; Jeremy Jago
Newsletter Editor: Roger Steele, 07474 257029
Website Editor: Nigel Lee, 0115 9788059

Campaigns:

Nottm ProWA: Roger Steele, 07474 257029
Shalegas: Nigel Lee, 0115 9788059
Bee Cause: Greg Hewitt (to February 2016)
Waste & Resources: Nigel Lee, 0115 9788059

For general information, please visit our website (see below), or write with an SAE to Nottingham Friends of the Earth, c/o Sumac Centre, 245 Gladstone Street, Nottingham NG7 6HX.

For information about joining the group, please mark the envelope "Membership".

For latest campaign news and contact details, visit
<http://www.foe.co.uk/groups/nottingham>
Or 'Friends of the Earth – Nottingham' on Facebook.

National Friends of the Earth has moved. The new address is The Printworks, 131-143 Clapham Road, London SW9 0HP (020 7490 1555), or email info@foe.co.uk.
See national website www.foe.co.uk for easy online actions.

We meet on the last Tuesday of the month (except August and December) at the Friends Meeting House, Clarendon St, Nottingham NG1 4EZ, between 7.30pm and 9.30pm. Please come and join us. You would be very welcome.

Printed on recycled paper.

If you would like to receive future editions of this newsletter electronically to save paper, please let us know your email address. You can contact us at nottinghamfoe@hotmail.com. Please note that the file size can be over 1.2MB.

AGM announcement

Our next Annual General Meeting will be on Tuesday, 29th March 2016 (7.30pm, Friends Meeting House – see above for address)

We look forward to seeing you there.