



# Forum 21 Newsletter

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***Working for a Fair and Sustainable Western Somerset***

## Doubts raised over legal definition of fracking



*The only well fracked in the UK so far, which caused small earthquakes near Blackpool in 2011, would not qualify as fracking under the definition.*

In rules that came into force on 6 April, fracking is defined by the amount of high-pressure fluid used to fracture rocks and release gas or oil. However, the only well fracked in the UK so far, which caused small earthquakes near Blackpool in 2011, would not qualify as fracking under the definition.

With the latest government survey\* showing that only 19% of people back fracking while support for renewables has risen to 81%, the government has now been accused of including a large loophole in its legal definition of fracking. According to a leading geologist this could enable companies to bypass safety regulations.

According to Prof Stuart Haszeldine at the University of Edinburgh, analysis of more than 17,000 gas wells fracked in the US from 2000-10 shows 43% would not be defined as fracking under UK rules.

The safety regulations in the new rules, such as independent inspection of the integrity of the well and sealing it after use, only apply if the drilling activity is defined as fracking.

### Large loophole

“If a UK well is not officially ‘fracked’, then there is a very large loophole, where a developer may not be enforced to take all these additional safety precautions,” said Haszeldine, who has just returned from a visit to the heartland of US fracking in Pennsylvania.

*\* Department of Energy and Climate Change’s regular public attitudes tracker*



*Forum 21 volunteers at work on the Community Woodland Project. Wood will be stored and provided at competitive prices for people in fuel poverty.*

## Inside

**Renewables and bills: the facts**

**The outlook for Somerset – warmer wetter winters, rising temperatures and a sea level rise of at least two metres**

**World heading for catastrophic natural disasters**

**Preventing food waste**

**Clouds play key role in climate change**

*Tweet from Molly Scot Cato*

**Coal is dying, long live solar!**

**Solar power has set a new British record by beating coal for a day.**

**Coal’s decline continues as figures show homes and businesses got more power from the sun for an entire 24 hours one weekend in April.**

**Join in - tweet Forum215**

***Forum 21 is a not-for-profit company whose aims are to raise awareness about ecology, natural history, resource conservation, sustainable development and environmental studies as well as to conserve and protect the environment and natural resources.***

## Renewables and bills: the facts

**Merlin Hyman** of Regen SW debunks some common claims about the contribution of 'green energy' to household bills and UK jobs.

The threat to the Port Talbot steel works has seen claims that 'green energy' is putting up bills and costing the UK jobs - the latest in a long line of claims about the impacts of renewables on energy bills. In response we have produced the facts about subsidies for renewables, impact on energy bills and how this compares with other sources of energy.

### BILLS

- Government energy policy measures are responsible for around 1 per cent of the costs of Port Talbot steel works. And that's before the rebate the Government pays to energy intensive users (now being replaced by a complete exemption).
- In 2014 renewable subsidies were responsible for £45 of the average £1,369 household dual fuel bill (£36 ROCs and £9 FIT).

### SUBSIDIES

- Globally, according to the International Monetary Fund, the fossil fuel sector receives subsidies of \$5.3 trillion a year; more than the total health spending of all the world's governments. And the UK is the only G7 country to be increasing them.
- Tax cuts in Budget 2016 mean the North Sea oil industry is predicted to be a £1 billion burden for the taxpayer next year.
- The annual government grant to the Nuclear Decommissioning Authority is £2.25 billion. Divide that by 26.3 million households and you find that the average cost of dealing with nuclear waste is £86 per household.
- Diesel generation was handed subsidies of £175 million in December.
- The government agreed in 2015:
  - £92.50 per MWh as a guaranteed price for power generated by Hinkley

- C new nuclear power station for 35 years (in negotiated deal).
  - £80 per MWh as a guaranteed price for power from wind and solar projects for 15 years (in a competitive auction).
- Costs for wind and solar have continued to drop since then. Good Energy recently announced they plan to build a wind farm with no subsidy, making onshore wind the only generation technology that can be built subsidy free.

Blaming the problems for British steel production on green measures is the latest in a long and dishonourable tradition of scaremongering about the cost of curbing pollution. *Those interested in the history of this tradition can find more in the 2004 WWF report 'Cry Wolf'.*

## Nuclear power

### Building renewable power instead of Hinkley C would save billions, says thinktank

Scrapping plans for new nuclear reactors at Hinkley Point and building huge amounts of renewable power instead would save the UK tens of billions of pounds, according to an analysis by the Intergenerational Foundation thinktank. They calculate that Britain would pay up to £40bn less for renewable alternatives that would generate the equivalent power to Hinkley over the plant's planned lifetime.

A final investment decision by EDF on the nuclear power plant's expansion is not expected now until the autumn with fears it may never be built. The deal involves the government committing £92.50 per megawatt hour over 35 years for its electricity output, more than twice the current wholesale price.

The Intergenerational Foundation

thinktank, which campaigns on fairness between generations, found that onshore windfarms would cost £31.2bn less than Hinkley, and solar photovoltaic power £39.9bn less over 35 years to build and run. The estimate is based on both the value of subsidies paid by the taxpayer for the electricity and the cost of building the infrastructure.

The analysis is based on the government's 'contracts for difference' subsidy levels for the technologies and projections by Bloomberg for how the cost of wind and solar power will fall.

Andrew Simms, one of the report's co-authors, said: "The government's current plans for new nuclear power will break spending records and pass both high costs and large, unknown economic risks onto every UK child for generations to come."

## Fuel poverty

### Treasury blocks plans to change the Warm Home Discount scheme to target the most vulnerable

Leaked emails show that the chancellor George Osborne overruled energy minister Amber Rudd by vetoing changes to the government's £320m scheme tackling fuel poverty that would have targeted it at the neediest families.

The two clashed during March over changes to the Warm Home Discount, which is administered by energy providers and provides a £140 rebate to help poorer households pay their bills.

A government spokesperson told the *Guardian*: "We're consulting on minor changes to a successful scheme that is helping to reduce fuel poverty in the UK, to make it more effective. The consultation is open now for everyone to tell us their views".

### The outlook for Somerset – warmer wetter winters, rising summer temperatures and a sea level rise of at least two metres

“Everyone has a responsibility to reduce the risk of damage caused by climate change. Do not go looking for scapegoats but take measures within your own control, however small, to safeguard people, property and resources.” This was an important message from Lord Krebs, a cross-bencher and chair of the Adaptation Sub-Committee of the UK Climate Change Committee, to a meeting organised by the RSA Taunton Network and Bridgwater College. The meeting was chaired by Matthew Taylor, Chief Executive of the RSA.

Sensible changes are needed to mitigate the process and would be beneficial even if climate change was not occurring.

Lord Krebs outlined the climate changes we can expect in Somerset in the next 50 years, including warmer wetter winters, increasing summer temperatures and a sea level rise of two metres, maybe more.

#### Tippling points

Some members of the audience felt this was not realistic as tipping points, for example, the release of methane, could accelerate the rate and level of rise.

Every four years the Climate Change Committee reports to the UK Government about the risks faced by the UK through climate change. The next assessment of the evidence will be published in July this year. Lord

Krebs indicated that the report will identify the three major risks as river, flash and coastal flooding, serious harmful effects on soil fertility and water shortage, especially in south east England.

He assessed the Government’s performance against its stated commitment to reduce greenhouse gas emissions and to adapt to climate change. He said that our Government is not investing enough in flood defences and is still allowing too many houses to be built on sites which are known to have a high flood risk. He also mentioned that the Government’s new insurance arrangements, through Flood Re, which came into force in April, do not apply to new houses or to commercial buildings.

Lord Krebs said the uptake of sustainable urban drainage systems is inadequate and he is trying to amend new legislation to remove the automatic right for developers to connect to existing drainage systems. He would also like to see a requirement for all new houses to be built to a much higher standard of energy conservation.

The government is running two urgent reviews:

- 1) Short term protection of essential infrastructure, for example electricity stations, and
- 2) Longer term management of catchments.

Housing is still being developed on flood risk areas. The CAP farming policies could be changed to pay farmers to allow their fields to be flooded to protect homes and infrastructure.

#### Carbon budgets

Five yearly carbon budgets will gradually lead to closure of fossil fuel energy production. Importation of goods from abroad means that a consumption accounting of carbon emission would be more accurate than that only created in the UK.

Lord Krebs lamented the lack of development of Severn tidal energy and the reduction of support for renewable energy.

Matthew Taylor and Lord Krebs discussed the issues of probability v certainty, which confuse the issue in the public mind, and the precautionary principle, which can be more hindrance than help.

Policy short termism which has prevented effective action must be overcome. Lord Krebs gave the example of the pension industry which has to be realistic about policies and long term outcomes.

Asked if he is optimistic about the future, Lord Krebs said, “Action leads to hope”.

*Report by Lou Matter of SW RSA and Maureen Smith of Forum 21.*

### World heading for catastrophic natural disasters

The world’s failure to prepare for natural disasters will have “inconceivably bad” consequences as climate change fuels a huge increase in catastrophic droughts and floods and the humanitarian crises that follow, the UN’s head of disaster planning has warned.

Last year, earthquakes,

floods, heatwaves and landslides left 22,773 people dead, affected 98.6 million others and caused \$66.5bn (£47bn) of economic damage. Yet the international community spends less than half of 1% of the global aid budget on mitigating the risks posed by such hazards.

Robert Glasser, the special

representative of the secretary general for disaster risk reduction, said that with the world already “falling short” in its response to humanitarian emergencies, things would only get worse as climate change adds to the pressure.

#### Reducing disaster risk

He said: “The only way we’re going to be able to

deal with these trends is by getting out ahead of them and focusing on reducing disaster risk.”

Failure to plan properly by factoring in the effects of climate change, he added, would result in a steep rise in the vulnerability of those people already most exposed to natural hazards.

### New section of England Coast Path will allow people to walk the length of Somerset's coast

The longest section of the planned England Coast Path was opened at Doniford last month. At 58 miles it gives the public access to some of Somerset's most spectacular coastline.

The official unveiling was performed by Natural England's Chairman, Andrew Sells. The new stretch, following two thirds of the county's coast from Brean Down to Minehead, represents a significant step towards the creation of the England Coast Path.

Mr Sells said, "I'm delight-

ed to open this new stretch in Somerset. For the first time, people will be able to walk the length of Somerset's coast along a high-quality footpath and enjoy some stunning new views and coastal wildlife. Visits to the coast remain one of our most popular activities and are worth millions of pounds to our regional economies."

Somerset Wildlife Trust has produced interpretation boards for key locations along the route. These will give background information on each area,

including the habitats and species present, plus interesting historical information. The signs will be at Brean Down, Berrow Dunes, Burnham-on-Sea, Wall Common, Stolford, Lilstock and Blue Anchor, before the path joins the existing South West Coast Path at Minehead.

Natural England is currently establishing a 2,700-mile continuous path around the entire English coastline by 2020. Work is already under way on more than half the path, described by Andrew Sells as "The most significant rights of way project for a generation".

### Get advice on switching - and save money

The next switching session at Minehead Energy Saving Centre will take place on 4 June between 10am and 1pm.

Transition Minehead & Alcombe (TMA) have been running these sessions throughout the winter, helping people to save on their fuel bills. At the session on 9 April people who switched in the centre saved collectively £1,255 and others were advised on how to do it themselves. TMA also gives advice on insulation, heating and financial help.

The Centre is located in Minehead Co-op car park. For further information or advice phone Hester Watson on 01643 821768.

### Making a priority of preventing food waste

Initiatives to deal with waste prevention in the county were highlighted at a conference held by the Somerset Waste Partnership in March.

*Scrapstores* form a chain from Bristol, via Taunton and Minehead (based at Clowns in Minehead Eye). Taunton Scrapstore prevents three tonnes of waste per year going to landfill. The stores collect and store any waste material which can be used for play, for example, paper and packaging. They also provide Playpods for school playgrounds. These are collections of everyday items, such as old cordless phones which are left in a container in the playground to encourage play. A reduction in playground misbehaviour and aggression has been noted!

Other groups included West Somerset Cloth

Nappy Library; Freecycle events - Green Wedmore; Composting - Carymoor Environment Trust; Share - a library of things, Frome ; Furniture reuse groups; Repair Cafe - Tiverton; Men's Sheds - making friends while making things - Somerset levels and Moors Sheds.

The amount of waste is declining and the amount of recycled waste has levelled off. These are national trends and partly due to less use of newspaper.

Some of the points raised included:

- Because of its density, food waste makes up 30% of waste;
- Around 10% of householders are very thorough at recycling, a large group recycle fairly well and 10% are "not very good". The key to changing behaviour is to carry on recycling to normalise the process, as

happened with seat belts and quitting smoking;

- Land refill costs have increased fivefold in the last five years;
- A trial to recycle plastic food packaging in Taunton Deane was successful but the market for the plastic is not favourable at present;
- A consultation found that the majority of householders (86%) favour a three-week black bin with one week recycling collection. Perishable waste should be recycled leaving inert material in the black bin.

There is a plan for the EU to adopt a Circular Economy Plan, which involves using the prevention, reuse, recycle, energy hierarchy of waste management. Currently this applies to 20% of the EU economy.

It would make sense to dispose of types of plastic which cannot currently be recycled in landfill (until it

### Help for those in fuel poverty

Six volunteers with Forum 21's Surviving Winter project visited 81 people and distributed £11,025 in grants in 2015/16.

can be mined and reused in the future), than in the sea where it causes harm to the whole food chain, including humans. I also plan to use coffee grounds as a slug repellent on the community allotment and research the potential use of coffee grounds available in Minehead as the result of our burgeoning cafe society.

*Maureen Smith - TMA and Low Carbon Partnership West Somerset and Exmoor.*

### Clouds play key role in climate change

According to new research climate change projections have vastly underestimated the role that clouds play, meaning future warming could be far worse than is currently projected.

Researchers say that a doubling of carbon dioxide in the Earth's atmosphere compared with pre-industrial times could result in a global temperature increase of up to 5.3C – far warmer than the 4.6C older models predict.

The analysis of satellite data, led by Yale University, found that clouds have much more liquid in them, rather than ice, than has been assumed until now. Clouds with ice crystals reflect more solar light than those with liquid in them, stopping it reaching and heating the Earth's surface.

The underestimation of the current level of liquid

droplets in clouds means that models showing future warming are misguided, says the paper, published in *Science*. It also found that fewer clouds will change to a heat-reflecting state in the future – due to CO2 increases – than previously thought, meaning that warming estimates will have to be raised.

#### Food security

Such higher levels of warming would make it much more difficult for countries to keep the global temperature rise to below 2C, as they agreed to do at the landmark Paris climate summit last year, to avoid dangerous extreme weather and negative effects on food security.

The world has already warmed by 1C since the advent of heavy industry, driven by CO2 concentrations soaring by more than 40%.

### Unchecked climate change could cut value of world's financial assets by £1.7tn

A new study, published in the journal *Nature Climate Change*, used economic modelling to estimate the impact of unchecked climate change and found it could cut the value of the world's financial assets by \$2.5tn (£1.7tn).

The Bank of England and World Bank have also warned of the risks to the global economy of climate change and the G20 has asked the international Financial Stability Board to investigate the issue. In January, the World Economic Forum said a catas-

trophe caused by climate change was the biggest potential threat to the global economy in 2016.

"Physical climate change impacts are a systemic risk on a massive scale," said Ben Caldecott, the director of the sustainable finance programme at the University of Oxford. "Investors can do much more to differentiate between companies more or less exposed and they can help reduce the risk to the global economy by supporting ambitious action on climate change."

### Earth 'wobbling' on its axis

Global warming is changing the way the Earth wobbles on its polar axis, a new Nasa study has found. Melting ice sheets, especially in Greenland, are changing the distribution of weight on Earth. That has caused both the North Pole and the wobble, or polar motion, to change course, according to a study published in the journal *Science Advances*.

Scientists and navigators have been accurately measuring the true pole and polar motion since 1899, and for almost the entire 20th century they migrated a bit toward Canada. But that has changed this century and it is now moving toward England, according to a study led by Surendra Adhikari at Nasa's Jet Propulsion Lab. "The recent shift from the 20th-century direction is very dramatic," he said.

While scientists say the shift is harmless, it is meaningful. Jonathan

Overpeck, professor of geosciences at the University of Arizona, who wasn't part of the study, said, "This highlights how real and profoundly large an impact humans are having on the planet."

#### Polar motion

Since 2003, Greenland has lost on average more than 272 tn kilograms of ice a year, and that affects the way the Earth wobbles, said Nasa scientist Eirik Ivins, the study's co-author. West Antarctica also loses 124 tn kgs of ice and East Antarctica gains about 74 tn yearly, helping tilt the wobble further, Ivins said. They combine to pull polar motion toward the east.

Jianli Chen, a senior research scientist at the University of Texas' Center for Space Research, first attributed the pole shift to climate change in 2013. "There is nothing to worry about," he said. "It is just another interesting effect of climate change."

### Forum 21's newsletter is published quarterly in July/August, October, January and April.

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