



BASSINGBOURN TRANSITION VILLAGE

This leaflet launches 'Bassingbourn Transition Village'.
This initiative will carry on the work of the Parish Plan 'Living Local' group.

So what is a 'Transition Initiative'?

The Bassingbourn transition village initiative is about re-imagining how Bassingbourn works and thinking about the future.

It is about raising awareness and understanding of some of the big issues we face and looking for simple local responses.

It is a project to help focus the communities transition from feelings of anxiety and uncertainty in the face of climate change and a future without oil, to a positive, practical plan for a more self-reliant Bassingbourn.

There are many new transition initiatives across Britain.

Do all the initiatives share common assumptions?

All the initiatives are individual and based around local circumstance but they share the belief that it is better for a local community to pull together and collectively plan for lower energy consumption and a changing climate rather than being taken by surprise. The shared aim is creating more local resilience in ways that recognise the biological limits of our planet.

So it's about practical actions that will create more enriching lifestyles?

Yes it's a positive process - if enough thinking and design is applied creatively the future may well be preferable to the present.

The aim of the transition initiative is not to depress people but pass on information (as inconvenient and unpalatable as some of that information is) and find exciting local answers to the challenges ahead.



So what is Climate Change? The World's climate is always changing, why worry?

Climate is not static and some summers will be hotter and some winters colder. Short term fluctuations are normal.

However as a result of measuring the world's climate trends accurately since 1850, studying ice cores and tree rings to create a picture of trends from the distant past, scientists have become concerned about the rate of change in global temperatures concluding the world **is** getting warmer.

Why is it happening?

The world's climate is very complex. Many factors influence climate including variations in the sun's radiation, changes in the earth's surface (such as the amount of ice and vegetation cover), and the components of the atmosphere.

The "greenhouse effect" is the way in which the Earth's atmosphere acts to retain heat from the sun. This is a very well understood mechanism based on solid science. The proportion of different gases in the atmosphere has fluctuated, however over the past two hundred years the use of fossil fuels has resulted in dramatic increases in greenhouse gases in the atmosphere.



Transition Tips

-  Cavity wall insulation can cut heat lost through your walls by 60%. Loft insulation (250mm or more) can save up to 20% on your heating costs. Don't forget double-glazing and draught-proofing.
-  The Energy Saving Trust (0800 512 012) offer a FREE energy efficiency survey. Grants are also available for energy efficiency measures; try Warmfront.co.uk
-  Turn off all lights when you can. Lighting accounts for 7% of CO2 emissions. Fit energy-saving light bulbs. These use 70% less electricity, saving you about £7 per bulb per year.

Why should we do something about Climate Change?

We are all used to the Earth providing a stable environment with basic resources such as water, energy and food. Runaway climate change will fundamentally effect the environment we live in. Scientists are concerned about the climate reaching "tipping points" which lead to "positive feedback" effects on climate. For example, if the climate continues to warm the ice cover at the poles will continue to melt and therefore the amount of the Sun's radiation reflected back into space will decrease, further increasing the warming of the atmosphere.

The Earth will always change its state and nature will adapt, but after major climate change, the planets new form may not include the survival of 'civilised' human society as we know it.





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So how do we reduce the impacts of climate change?

We can all make small changes to help reduce greenhouse gases – see the 25 transition tips in this leaflet.

Getting involved in creating long term local solutions is exactly the point of 'Bassingbourn Transition Village'.

But what about the rest of the world?

Although Britain only causes 2% of the world's emissions, we only have 1% of the world's population so we are creating twice our fair share of emissions. It is difficult to get other countries, such as China and India, to reduce their emissions when we are responsible for so much more per person than they are.

So when is the world Oil Peak expected?

According to the Association for the Study of Peak Oil (ASPO), world oil peak is likely to occur sometime between 2008 and 2010. Some analysts believe we may have already passed the peak and are currently on an uneven plateau.

Increasingly remaining oil is in inhospitable environments such as the Antarctic and deep seas where extraction presents major technical issues so is very energy intensive.

In the 1930s, every unit of energy invested in producing oil returned 30:1, currently oil is yielding 8:1 and this will only decline as the remaining reserves become increasingly difficult to obtain.

It seems certain however that within a few years, the effects of oil peak will begin to be felt as for the first time in history the amount of available cheap oil based energy declines.

Won't higher prices just destroy demand and the market will balance the situation out?

Demand is still growing and prices will rise (as we have seen recently) but the situation may not balance so easily.

Our addiction to oil means we've become oil-dependant for food, transportation, heating and lighting, and also for making practically anything that is plastic. How do we deal with less oil providing less energy and less things?

We have created an economic model based on unending growth. But instead of a growth of oil based energy we will soon see the long term decline of oil based energy, which in turn will lead to a shrinking economy.

Transition Tips

-  Buy energy efficient "A" rated fridges, washing machines etc. Wash your clothes at the lowest temperature possible. Use full loads or don't buy a dishwasher & use your own renewable energy to wash up!
-  Turn your heating thermostat down and set the heating to go off 30 minutes before you go to bed.
-  Switch to a 100% renewable energy supplier.
-  Don't leave electrical items on standby. If everyone switched their TV off at night, the energy saved would power Basingstoke! Fit in-line switches if the socket is not at hand.

Why worry about Oil? What's Peak Oil?

Peak Oil refers to the point when we reach the maximum extraction of oil. After this peak the rate of oil extraction will decline.

World discovery of oil peaked in 1964 and has been declining ever since, despite considerable improvements in technology, and there is no prospect of any new large discoveries. We are currently using more than 4 barrels of oil for every one discovered.

Does this mean that the world is running out of oil?

Not exactly. Globally we have used about 1 trillion barrels (approximately half) of the 2 trillion barrels of oil that has been laid down in the earth over millions of years.

So what's the problem? If it has taken us 150 years to burn the first Trillion barrels, we have plenty left for at least a couple of generations - right?

There is still a lot of oil left but we are running out of the 'easy extraction' (therefore cheap) oil. Current statistics show 54 of the 65 largest oil producing countries have already passed their peak production.

Transition Tips

-  Fill the kettle with only as much water as you need. Cook with lids on your pans. A kettle draws more energy than a cement mixer.
-  Purifying our tap water uses huge amounts of energy. Don't leave taps running, wash the car with a bucket not a running hose and install a water butt for watering plants.
-  Install a woodburning stove and heat yourself with locally sourced firewood - it's a biofuel and carbon neutral. Install solar water heating panels to heat water.



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Why can't we just switch to alternatives like solar, bio-diesel and wind?

The truly extraordinary properties of oil make it effectively irreplaceable; oil has the greatest energy density of any known substance (apart from uranium). Even with an 8:1 energy returns oil gives a far higher return than the alternatives like bio-diesel.

All alternatives currently require some oil in their manufacture and maintenance, be it high quality steel in windmills or keeping the service roads open and the solar panel delivery vehicles on them. Bio diesel would require huge areas of agricultural land (currently used to grow food) just to supply diesel at the pumps.

We have become dependent on oil because of its versatility, liquidity (which makes it easy to move around). It takes 80-90 barrels of oil just to manufacture a car. Clearly alternatives will not easily make up the shortfall and we won't be building computers out of sunbeams or fuelling fleets of airplanes with bio-fuels.

Transition Tips

-  30% of food we buy is thrown away. It takes a lot of energy to produce and transport food, so wasted food is wasted energy.
-  Buy seasonal local food. This food hasn't been grown in a heated polytunnel, or flown in from abroad.
-  Grow your own food. Minimum carbon emissions, maximum taste and nutrition and great fun!



OK but there are reports of new breeds of fail-safe nuclear reactors.

Even if nuclear power were a safe option - and the record of nuclear is lamentable - we would need huge numbers of nuclear power stations (which take a long time to build) to replace the energy we get from oil.

Uranium is itself a finite, depleting resource, mined and transported at environmental cost and risk. But even if we used up our uranium and worked out what to do with nuclear waste we would only be delaying the transition we need to make by a few years (do we want a nuclear reactor near Bassingbourn?).

Transition Tips

-  Walk or cycle for short trips — it is cheap and healthy. 25% of all car journeys are less than 2 miles.
-  Try to use public transport and have local timetables around so you know what's available.
-  Drive as soon as the engine is on and turn off when stationary. Drive gently and slowly. 55mph is the most fuel-efficient speed.
-  Plan ahead, choose uncongested routes and car share. Offer lifts to neighbours and friends.
-  Service your car regularly and check tyre pressure - it makes a big difference to fuel consumption.
-  Travelling by air produces about 19 times more greenhouse gases than rail travel.

OK but China and the US have vast reserves of coal!

True, but coal is also a finite resource and we will hit "Peak Coal" just as we will hit Peak Oil. Aside from the huge implications continuing to use other fossil fuels has on climate change, good quality coal is already in short supply. Like oil coal extraction is increasingly difficult with ever more human and environmental costs.



We won't easily be able to convert the world's 500 million internal combustion engines to run on coal.

What about the 'Hydrogen economy'?

Although you only need water and electricity to make hydrogen it is not an energy source but an energy **store**. Currently electricity used to make Hydrogen is produced mainly from non-renewable sources like natural gas.

Natural gas will peak and unlike oil, gas production will fall very sharply since gas can be extracted more completely than liquids like oil. Even if a super renewable hydrogen production method is invented the world's massive infrastructure is built to run on the properties of oil.

It will be a long, hard and expensive task to refit our infrastructure to run off a different form of energy especially as hydrogen is volatile and hard to transport.





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What else can we expect after oil peak?

Nearly everything we do in the modern world is based on cheap fossil fuels. This includes basic commodities like food. The average food item has travelled over 1000 miles before it arrives on our plates.

For every 1 calorie of energy in our food we have burned 10 calories of fossil fuel energy in farm machinery, fertiliser, pesticides, transport and packaging. If you want a definition of "unsustainable", this is it.



The use of fossil fuels to produce food is the single most important factor in the rapid explosion in the human population. Since the oil/industrial age began in the 1850s, the world's population has grown from about 1.7 billion to over 6.5 billion. It is unlikely a world without oil can sustain anything like 6.5 billion people. Many analysts see the US invasion of Iraq as the first blow of what could become globally escalating resource wars for the last remaining oil supplies.



This sounds all very gloom and doom. No one is going to listen unless you give us some good news!

Sadly Peak Oil is a geological reality not a fantasy created by negative thinking. Climate change is an accepted reality by governments across the globe. Many people want to believe we can continue with 'business as usual' forever and are either unaware of the wider issues or would rather not know.

Transition Tips

-  Only buy what you need. Use second hand and charity shops. Investigate www.freecycle.org.uk.
-  Say no to unnecessary packaging and plastic bags. Re-use re-cycle and reduce your bin. Write "Landfill" on your dustbin!
-  If your company's energy bill is over £50,000 it can get a free audit from the Carbon Trust. Does your finance director know green energy tariffs can help avoid the Climate Change Levy?
-  Lobby the fleet manager to buy efficient vehicles.
-  Switch off computers, printers, equipment and lights. A copier left on all night wastes enough energy for 5,300 photocopies. Recycle cartridges and print what you need and on both sides.



If as a village we get together and respond positively to peak oil and climate change we could be looking forward to a more creative and stimulating future. Together we can build a village that is more self reliant, communitiy orientated and even more enjoyable to live in.

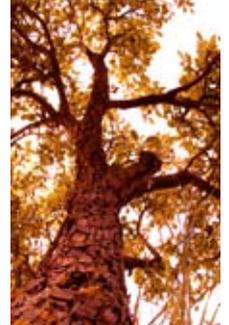
Please get involved & be part of the transition adventure - to register your interest contact Simon Saggars (01763) 243960, Angela Snelling (01763) 247937 Donald McFadyen (01763) 244836 or Jim Haigh (01763) 244515

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"The great thing about the dilemma we are in is that we get to re-imagine everything we do. Everything requires a complete re-make. What a great time to be alive, our generation gets to completely change the world!"

*Paul Hawken
(Environmentalist)*

Now is the time to ask the deeper questions about the kind of society we want to live in. What we want energy for? How much 'stuff' do we need?



So what will Basingbourn look like in a low carbon world?

That's the exciting challenge – no one knows...yet. We need to find the answers and the Basingbourn Transition Village initiative aims to be the focus of exploring and creating these new, positive solutions.

For example how can we stop being forced to pay increasing energy costs - could we use less or generate our own energy?

Our supermarket system is based on finite fossil fuels so how would Basingbourn feed itself without Tesco?

What about preserving and using our own stores of natural resources (water, building materials, soil and trees)? How could we encourage and benefit from traditional rural skills such as land and woodland management or local building design and construction etc?

A re-localised, resilient Basingbourn may well have many advantages. Life maybe less stressed and we may find we appreciate an improved local environment.

