

Peak Oil is a turning point in modern industrial society. The question is: what happens next?

In the UK, concerned people are already seeking to help their communities prepare for a different future. A future where we use less energy, particularly less oil, and we use it more wisely and sustainably. A pioneering movement called Transition Towns is spreading across the country.

Transition Cambridge is a grass-roots movement open to all. Find out how you can get involved.

Email us: transitioncambridge@googlemail.com

Visit our website: www.transitioncambridge.org

Sign up to our newsletter at www.transitioncambridge.org/signup

For further information on Peak Oil:

www.transitionculture.org

www.peakoil.net

www.theoil drum.com

www.energybulletin.net

www.peakoiltaskforce.net/



PEAK OIL

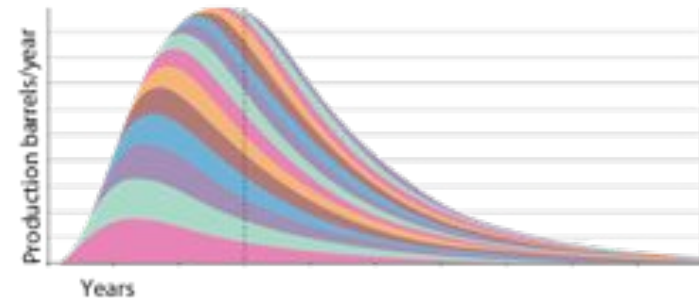
What is it?

What does it mean for us?

Until a few years ago, oil was cheap. If there was a blip in the price it was because of politics. Now it's expensive because of geology. *There isn't enough easy oil left in the ground to supply our growing demand.*

The trouble is, oil is a finite resource. For any one field, *when about half the oil is gone, production peaks and goes into decline.* Put lots of oil fields together and you get a smoother peak – but it's still a peak and then supplies start to decline.

'Peak Oil' is the term used to describe this point



Its hard to know exactly when and how sharp the peak will be. However we know we are close. Even though higher oil prices encourage exploration and enhanced recovery techniques mean we can use more from each field, conventional oil reserves have been shrinking since 1980.

WHEN WILL PEAK OIL OCCUR?

In terms of conventional oil, we have already reached peak oil. In 1999 North Sea oil production peaked and in 1971 US production peaked – the US now produces half the oil it once did.

The only place with large stocks of oil that may not yet have peaked is the Middle East – and even this is seriously in question. In 2011 WikiLeaks released cables suggesting that Middle East oil reserves are 40% less than claimed. Experts have been suspicious for years.

For the moment, increasing production of oil from deepwater rigs and tar sands is plugging the gap. But deepwater rigs are expensive and accident prone. Tar sands require a lot of energy and scarce water resources to extract the oil.

WHAT HAPPENS NOW?

Oil consumption dipped slightly in 2008 and 2009 due to the global recession but it is back up again now and growing. There's no slack in the system. That's why a single global event can send oil prices soaring. Unless we can break our dependency on oil, rising prices could even push us into another, deeper recession.

DO WE REALLY DEPEND ON OIL?

Worldwide, nearly 40% of our energy comes from oil. We also use gas and coal for heating, lighting and industrial energy, but transport accounts for a quarter of our energy consumption and almost all of that is oil. We use oil for our cars, lorries, ships, planes and tractors to grow our crops.

SURELY WE CAN USE OTHER SOURCES OF ENERGY?

What about natural gas?

Gas is too bulky to replace oil directly, though we can convert it to petrol. However, natural gas is also a finite resource, and is also expected to peak in the near future – and then decline even more rapidly than oil. Shale gas

is touted as a new resource but there are environmental concerns about its extraction, and like oil it is still a hydrocarbon.

What about coal?

Currently about a third of our energy worldwide comes from coal. But coal is another finite resource and some experts are saying we are already close to peak coal production. Besides which, increased use of coal would cause a huge rise in carbon dioxide emissions – which will intensify global climate change.

What about nuclear?

Many people think that nuclear is the best way forward, despite the costs, risks of accidents and the waste disposal problems. But nuclear power can never be enough on its own.



What about renewable energy sources?

- Wind, wave, tidal, geothermal – all provide only a fraction of the energy we currently use.
- Solar electricity and heat would be enough if we could capture and store it cheaply and effectively. In practice this is difficult.
- Bio-fuels need land to grow. To replace oil for the world's current transport needs we would need an area five times the size of Spain. We need that land to grow food. Already we have seen food riots in Mexico because farmers are selling corn – the country's staple food crop – to the US to be turned into bio-fuels for vehicles.
- Hydrogen is not an energy source. It's like electricity – it has to be generated from solar power...or fossil fuels!