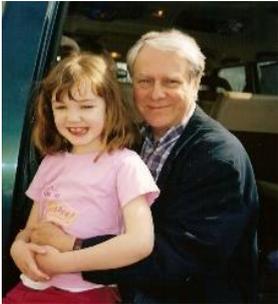


Energy Matters: What stories do we tell?



So, what have stories got to do with climate change? We all like stories because life is full of them – stories we enjoyed as children, family stories, adventure stories. Stories can embody great truths but also contain hidden lies. Stories can help give us find our way in turbulent times. They provide something to hold on to so we don't give up hope or get lost. They can give direction, not least in clarifying the choices we face over energy futures and the well-being of our communities.

Why stories matter

Stories can be found in books, online and in our own heads and hearts. Learning about the Greek myths at school I felt sorry for the ancient Greeks because they believed their stories were true. But myths can also contain profound insights about the human condition, with characters such as the Hero who saves the day and the Mentor who offers good counsel. These characters and situations can capture deep truths about life and its difficulties.

Understanding something about the power and value of stories can thus help us make more sense of the times we live in and the problems we face. Here I will be looking at two powerful stories, the old high-carbon story we grew up with and the new low-carbon version, essential reading for our future.

The old story: high-carbon

The Industrial Revolution occurred over a 200-year period from the mid-18th to the mid-19th centuries. This was when the foundations of the modern world were laid down, a new world driven by a coal-fuelled economy and continuous technological innovation. The breakthrough came with the development of the steam engine for pumping water out of flooded mines, driving forges and mills in factories. Whilst steam provided the power that was in turn dependent on readily available coal as fuel.

Without the use of coal the Industrial Revolution and the modern world would probably never have occurred. Its use and expansion led to previously unknown levels of prosperity as people expected more goods and a more comfortable life. In the 20th century oil became the dominant source of energy. This is the story most of us grew up with, a story of improvement and progress through human ingenuity. It was the Industrial Revolution that led to the breakthrough in which humans gained control of their world. That notion of control also involved viewing the natural world as an inexhaustible source of resources and somewhere to dump our waste. So, what have been some of the consequences of this story?

Some awkward consequences

We have become addicted to fossil fuels, first to coal and then oil and gas which, like many addictions, was because we didn't understand at first their dangerous secret – the

greenhouse gases released in their burning would seriously upset the balance of our atmosphere. This is where we need to return to the tales we collectively tell ourselves about life and its meanings. The dilemma is that from our birth we've absorbed a story about the meaning of life, which we don't see just as a story but simply as 'the truth'. Two such 'truths' are that science can solve all known human problems and that the human condition will continually improve. This is called 'progress' and this is what life is really all about.



Looking back at the 19th and 20th centuries we can now see that fossil fuels, on which this progress was built, had an unseen sting in their tail. Our ancestors could not have chosen differently as they didn't have the scientific insight we do. The task of present generations is to break the terrible addiction to fossil fuels on which this 'progress' was built. At heart the old story is a high-carbon one since our dependence on fossil fuels led to the carbon emissions that created global warming and climate change.

Rethinking the story

Standing back from this cultural story we can see it is underpinned by two powerful notions – progress and conquest. This notion of 'progress' is an emotionally appealing narrative which goes so deep it's like a surrogate religion. When people think about progress it's based on the presupposition that history always moves upwards and onwards. However, economic progress is measured by the success of free-market capitalism which has brought increasing damage to society and the environment. So, the old cultural story has a dark side we prefer to ignore. No society in history has continued for ever, despite our belief that we are different.

The old high-carbon story seemed to be a good guide to the future but we can now see it as seriously flawed. In stories based on myth the Hero is the one who saves the day. The high-carbon story embodies the myth of the Conquering Hero, but heroes can also have weaknesses. I recall the legend of Faust who sold his soul to the devil in his quest for knowledge, power and control. In doing so, however, he suffered eternal damnation - a Faustian bargain. Our long-term use of fossil fuels unwittingly became a dangerous addiction because of the immediate benefits it gave to society. In the face of global warming this Faustian addiction urgently needs to be challenged. It is time for a new story and a new narrative to live by. Fortunately, this story has already begun to emerge.

The new story: low-carbon

The seeds of the new story have been around us for the last fifty years. The old story was already beginning to slip in the 1960s, a period of creative dissent, when many challenges were laid down by younger people about the state of society. The early 1970s saw the birth of organisations such as Friends of the Earth and Greenpeace. The first global computer simulation, *The Limits to Growth*, explored how pollution, industrial growth, use of resources and food supply might interact over the next 100 years, predicting a bleak future.

Young people were deeply concerned about the state of society, calling into question the myth of material progress and high-consumption lifestyles. It felt time for a new story with the emergence of major social movements focusing on issues such as nuclear war, peace and conflict, the environment, race and gender. Gradually, in people's daily living, the workplace and the law, changes began to be made in relation to such issues. This was also when the first initiatives in renewable energy, both wind and solar, began to take place. What was this if not the call for a new cultural story - one which questioned existing consumerist norms with a more challenging view of what it meant to be human?

The counter attack

Such cultural changes in awareness do not occur overnight. The new story was attacked by powerful economists and politicians who believed capitalist free-market economics was the answer to everything. From the 80s onwards there was a massive counter attack by free-market economists, supported by President Reagan and Prime Minister Thatcher. The post-war consensus that both state and business had a role to play in the welfare of society was cast aside and the free-market seen as the solution to all things. In this view the state should interfere as little as possible with the workings of the business world and let privatisation reign in all fields of endeavour, from education and welfare to health and citizenship.

As a result, society has become more materialistic, selfish and narcissistic. Notions of trust, honesty, responsibility and care for others, are of much less importance in this view of society. In the face of climate change the new story needs to be an exciting and challenging one of where we need to get to - a low-carbon and sustainable society which does not harm people or biosphere. Here are some elements of the new story already visible around us.

Buildings and energy



All new-build housing needs to demonstrate high energy efficiency. An interesting example in the UK is the Denby Dale Passivhaus in Yorkshire. This is a three-bedroom detached house, built to a strict budget of £141,000, and using 90 percent less energy for space heating than the average UK house. It is twenty times more airtight than a standard build. The purpose of building the house was to provide the construction industry with an easy to build template for future low-

carbon housing. The main energy sources in a low-carbon society are increasingly visible around us - a mix of wind, solar, water and biomass which already supply 25% of our energy.

Travel and transport

In a low-carbon society fewer journeys will need to be made and more of those on efficient forms of public transport. Reducing the number of journeys will result in reduced energy demand in relation to transport. Quick, efficient public transport systems come in a variety of forms from train, coach and bus to tram and light rail. If designed to meet public need

they provide an efficient and effective low-carbon alternative. Many towns have already been redesigned to make safe walking and cycling a priority. Many car makers are now producing increasingly effective electric vehicles (EVs). Electric charging points for EVs are an increasingly common sight, as in cities such as Newcastle and elsewhere.

Consuming and wasting

One of the problems in the transition to a low-carbon society is the unsustainable way the Earth's resources are used, thus the notion of Earth Overshoot Day, the date when we've used up our annual quota of the planet's resources. The rest of the year represents our carbon emissions, unsustainable depletion of resources and serious damage to our biosphere. Overshoot Day keeps coming earlier – in 2011 it was September 27, in 2012 August 22, in 2013 August 20 and in 2014 August 19. We currently use up the equivalent of 1.5 planet Earths a year, consuming more resources than are sustainably available and emitting more waste than the planetary system can absorb.

Food and farming

In a low-carbon world food and farming will look different due to more extreme weather and the need to reduce food miles. Crops may need to be drought resistant and able to stand up to heavy rain. Warnings have been issued about the need for the UK to become more self-sufficient in food. Farming is also one of the main sources of two greenhouse gases. Nitrous oxide, from fertiliser manufacturing, has a 300 times greater impact on global warming than CO₂. Methane, from the digestive systems of cattle and sheep, manure and slurry, has 25 times the impact of CO₂. Low-carbon farming will make fertilisers more efficient and use anaerobic digesters to convert organic waste into biogas to generate electricity and heat.

Biodiversity

This refers to the variety of life on Earth, from insects, birds, fish and animals to plants, trees and micro-organisms. The greater the biodiversity the healthier our life-support system, the biosphere, is. Climate change causes many animals and plants to migrate to new habitats, one reason why previously unseen fish are now appearing in the waters off the UK. It is not only global warming which impacts on the biosphere but human activities too. A sustainable low-carbon society will be vigilant about the quality of land, air and water for all its inhabitants. Ecological awareness will become a key element in education again.

These are some of the low-carbon principles we need to begin to live by. Home, education and community are vital because this is where the new story needs to be learnt and modelled. It also needs to be enshrined in law. This is why one of the goals of the Welsh *Well-being of Future Generations Bill* is to create - 'an innovative and productive, low carbon emission economy, that makes more efficient and proportionate use of resources'. Key elements of the new story are now beginning to appear in law as well as in our hearts and minds.

Abridged from: Hicks, D. (2016) *A Climate Change Companion: For family, school and community*, available from Amazon as eBook and paperback.