

THE FUTURE IS NOW

By Professor Frank Trentmann and Rebecca Wright

Shortage is never far away from abundance. In 1956 Shell geologist Marion King Hubbert developed the theory of “peak oil”. US crude oil production, he predicted, would climb sharply until 1970 but then suffer a precipitous decline. A few years later, in 1972, the Club of Rome published its report on the *Limits to Growth*. Its computer-simulated scenarios of the growth of population, industry, pollution, food and the depletion of resources made for harrowing reading. Two of the three scenarios predicted the “overshoot and collapse” of the entire global system by the second half of the 21st century. Only one scenario pointed to a stable world.

The 1950s and 60s had been an era of affluence: Western societies never had it so good. These were the golden years of the television, the washing machine and the automobile. All of them were powered by energy. The 1973 Oil Crisis showed just how precarious this new material lifestyle was. Utopias of living with ‘more’ switched into dystopias of surviving with ‘less’. It was the 1970s that supplied many of our pop culture images of energy futures, most famously *Mad Max* (1979), recently revived in *Fury Road* (2015).

However, to reduce energy futures to just ‘peak oil’ and the 1970s energy crisis, would be a big mistake. Societies have worried about finite resources for a long time. Innovation and growth inevitably triggered fears of running out of resources. The 17th century worried about a ‘wood crisis’. In the 1790s, the Rev. Thomas Malthus described how limited food supply imposed a natural check on population growth: disease, starvation and war would return societies to a more sustainable level. When the industrial revolution got under way and more coal was needed to fire steam engines, Victorians began to worry about the limits of British coal reserves.

The 20th century produced a growing range of energy futures, some pessimistic, others optimistic. Forecasts looked ahead

5, 10, even 100 years. Governments, political movements and technocrats offered their visions of the future. But the future-oriented perspective was also a much larger cultural phenomenon. As time accelerated and space became compressed in the globalising era of the telegraph, steam ships and motorcar, artists and writers turned their eye to the future too. “Futurism” was born on the eve of WWI. The twentieth century looked to the future, perhaps more so than any other period. Our debates about sustainability and climate change today have emerged from that longer history.

Visions of the future involved more than a technical exercise of counting, graphs and computer simulation. They reflected the social and moral worlds of their times. Between 1900 and the 1960s, visions switched from progressivism to a new paradigm of economic growth and freedom of choice. But it also included ideas of social democracy and greater comfort for all.

In 1908, US President Roosevelt set up a National Conservation Commission to inventory the nation’s natural resources. Drawing on contemporary rhetoric about the second law of thermodynamics, it projected a Malthusian future with fixed limits. America had a choice: it could either burn through its resources but then enter a period of decline and exhaustion, or could conserve resources for future generations. It was a rallying call for responsible stewardship.

By the time of the Cold War, such exhortations of moral responsibility had given way to a new emphasis on individual freedom of choice. President Truman set up the President’s Materials Policy Commission in 1951. Its vision of the future, published the following year, was characteristically entitled *Resources for Freedom*. Its central mantra was that material and moral values were one and indivisible. Consequently, any desirable future had to be based on a respect for freedom of choice, growth and private

enterprise. This eliminated the space for lifestyle change. The Commission recognised that Americans drove “heavier automobiles than is necessary for mere transportation”, mostly alone, and wasted precious chromium on decoration, but such “lavish uses of materials” were ultimately defended as “valid choices in a society which places a high premium on freedom of choice.” Instead of moral stewardship, let alone socialist planning, future energy use would best be governed by individual choice and private business in a free market with little government guidance.

Forecasting practices thus came to mirror the Cold War divide between communist and capitalist nations. A 1956 UN report found a close correlation between planned socialist economies that set targets and liberal or social market economies which projected past trends of growth into the future. Britain, which mixed markets with nationalised industries and a welfare state, used both methods. Unlike their capitalist neighbours, planned economies took into account the entire web of consumption and production in their forward-looking economic plans.

Visions of the future are never neutral benchmarks to monitor change. They themselves provide direction and privilege certain voices, policies and interests over others. In many ways, they help create a particular future. In the 1950s and 60s American utilities forecast an on-going rise in electricity consumption of 7% per year. Fearful of blackouts, such forecasts justified the building of more power stations. This, in turn, meant higher prices and, together with conservation measures, led to a backlash. By the 1970s, the real growth in electricity demand had slumped to a mere 2% per annum. The forecast of electricity shortage had helped to generate its own electricity glut.

Whether they are “dirty” or “clean” – all energy systems operating today require massive investment and time. It is the job of forecasts to assist such forward



David Cameron addresses workers in 2014 at Hinkley B as part of his visit to the site of the UK first new nuclear power station in 20 years, Hinkley Point C. Photo: Department of Energy and Climate Change.

planning and avoid an ‘energy gap’ between supply and demand. In thinking about how to close that gap and keep the ‘lights from going out’, today’s solutions focus almost exclusively on the supply side, greater generating capacity and more efficient technologies. Much less thought is given to reducing demand by changing lifestyles. This is a curious imbalance, since it is ultimately what people do – travelling, cooking, charging devices – that consumes energy in the first place.

Given the huge amounts of money, political will and technological effort that are devoted to expanding capacity, the limited attention to people’s daily lives and energy-hungry habits is rather striking. Hinkley Point C, the first of a new generation of nuclear power stations to be built in Britain, will cost at least £18 billion. That is the equivalent of half of British government spending on housing and the environment, or 17 times the public money given to support arts and culture in the UK between 2015 and 2018.

In Britain today, the official governing logic is to maintain present lifestyles, with “no compromise of consumer utility”. But investments in such new power stations and infrastructures anticipate and help create future demand.

Thinking about changing lifestyles is not as difficult or weird as it may sound. After all, people’s habits and customs have changed throughout history. During and after WWII, Britain and many other governments compelled or encouraged people to rearrange their lives to save energy. California, in the 1980s, actively promoted energy saving as a ‘substitute’ power plant. Japan’s response to the Fukushima nuclear disaster has shown societies are much more flexible than they are often given credit for. By dropping the tie, reducing air-conditioning, changing work and holiday hours and a variety of other measures, Japan cut energy use during peak hours by 20%.

Climate change makes the debate over what kind of energy future we want

and can have more pressing than ever. The future is never fixed: there are alternatives, from redesigning mobility and people moving into co-housing all the way to more revolutionary ideals of self-sufficiency. Energy transitions, however, are rarely smooth and easy – Germany’s decision to phase out all nuclear power has perversely brought a renaissance of coal. In Berlin, the German government is building a “House of the Future” in which citizens, architects and planners can experiment and explore the world of tomorrow. What is clear is that imagination and creativity are just as essential as efficient technologies and generating capacity. Thus history and the arts must have a central part to play in how we imagine and plan our energy futures.

Professor Frank Trentmann and Rebecca Wright are at Birkbeck, University of London and members of the project *Material Cultures of Energy*, funded by the Arts and Humanities Research Council: www.bbk.ac.uk/mce/.