

# Escaping climate policy Groundhog Day

Matthew Lockwood and Andrew Pendleton argue that to escape the recurrent nightmare of climate change policy requires a radical revision of priorities

**I**n the film *Groundhog Day*, Bill Murray as egotistical TV weatherman Phil Connors is forced to live the same day time and again until he realises he can only escape by re-examining his life and priorities. The debate about how to avoid dangerous climate change is currently caught in a similar, recurrent nightmare.

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For if we have learned anything from the past decade of climate change science, it is that the only news is bad news. Things are proving worse in practice than was assumed in theory. Emissions turn out to be growing faster than was projected. Planetary mechanisms in response to higher temperatures, and that could lead to runaway climate change, appear to be underway already. The oceans are absorbing less carbon dioxide than we had originally calculated. Ice sheets are melting more quickly than models predicted.

To each grim, new scientific prognostication, the understandable response of many in the environmental movement is to call for tougher reduction targets and for ever more

stringent economic and political measures to curb greenhouse gas emissions. However, every time these calls are made and governments dismiss them as unrealistic the gap between the two sides widens, and all the while emissions carry on rising. To awaken from this Groundhog Day nightmare, a fundamental re-examination of priorities in climate policy is badly needed.

The latest chilly blasts of reality on global warming come from experts in the UK, US and Australia. The conventional view is that if the world can halve its emissions by 2050, it will be possible to limit warming to an increase of 2°C above pre-industrial levels, a level thought to be acceptably 'safe'.

But while many studies, including the Stern Review, model greenhouse gas emissions since 2000, Kevin Anderson and Alice Bows at the UK's Tyndall Centre on Climate Change look at the real trends and what they mean for efforts to stabilise global temperatures (Anderson and Bows 2008). They argue that even with an optimistic interpretation, a halving of emissions is likely to mean a temperature rise of 4°C. The NASA climatologist James Hansen and seven other scientists go even further, and argue on the basis of the historical record that temperatures could increase by as much as 6°C (Hansen *et al* 2008).

Meanwhile, Peter Sheehan at Victoria University in Melbourne, Australia argues that we will struggle to get close even to the seemingly inadequate halving of global emissions by 2050: 'It is likely that, without

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changes to the policies in place in 2006, global CO<sub>2</sub> emissions from fuel combustion would nearly double their 2000 level by 2020' (Sheehan 2008).

All of this means that to avert dangerous climate change not only will developed countries have to more or less eliminate greenhouse gas emissions, but there will have to be a real-terms reduction in the developing world, too, by virtue of the simple arithmetic that the latter now accounts for more than half of global emissions (Baer *et al* 2008).

## Progress in reaching an effective global agreement to cut emissions has been much too slow

Progress in reaching an effective global agreement to cut emissions has been much too slow. Full scale negotiations are now underway for a new agreement, but in terms of practical outcomes, nothing has been achieved since the Kyoto Protocol was first signed in 1997. Oxford economist Dieter Helm, assessing why agreement has been so hard to reach, concludes: 'It is very grim. The trends are in the wrong direction, the timescale is short, and a Kyoto-style new agreement from 2012 is unlikely to make much difference to the underlying (upward) trends in emissions' (Helm 2008: 236).

Policymakers in the United States, European Union, Australia and other rich countries all have different positions. There is a chasm between the expectations of the developed world and developing world groups, which includes China, on who should take on which targets. And there is a huge gulf between what is on the negotiating table and what scientific studies say is required to avoid a very large temperature increase (see Global Climate Network 2008).

It is easy to despair: indeed, it appears that some commentators may gain a secret thrill from the severity of the climate problem, indulging in 'climate porn' (Eureat and Segnit 2006). However, the other, increasingly common, response is to recognise that

current climate policy processes are not working, and that if we are to have any chance of progress, we have to consider a radically different approach. This might be a managed economic recession in industrialised countries (Anderson and Bows 2008), a recasting of the costs of both mitigation and inaction to make a more accurate economic case (Helm 2008), inclusion of the latest science into the UNFCCC negotiations (Porritt 2008), or greater political leadership for a more radical package of measures (Monbiot 2008).

In this paper, we, too, argue that to have a chance of real emissions reductions, radical measures are necessary. However, this should begin not with the science and the target-setting but, counter-intuitively, with the politics. Leaders in both rich and poor countries are heavily constrained by domestic politics. Any strategy that does not thoroughly engage with this reality will gain little traction outside a limited community of climate activists.

Below, we assess the two most commonly-voiced, radical responses to the climate crisis – the calls for more stringent targets and comprehensive cap-and-trade measures or for greater political leadership – and conclude with some thoughts on what a radical response tailored to political reality might look like.

### The costs of mitigation and the domestic politics of climate policy

There is no easy, cheap solution to climate change. Other environmental problems such as acid rain could be solved by the application of relatively low cost alternative technology or with the addition of 'end-of-pipe' hardware that was well known. By contrast, fossil fuel use is woven into the fabric of our lives and the few technological solutions we currently have are nascent and relatively expensive.

Decarbonisation will therefore come at a price. Conventional assessments of the global costs of mitigation – for example in Stern 2006 – were of the order of 1 per cent of World GDP per year. Stern has subsequent-

ly doubled this estimate. For the UK, the Committee on Climate Change has recently concluded that cutting domestic emissions by 80 per cent by 2050 would cost in the region of 1-2 per cent of GDP per year by 2050, similar to the results of research commissioned by ippr in 2007 (Committee on Climate Change 2008). Expressed in these terms, such cost estimates seem quite low. But in monetary terms they are substantial – up to £70 billion a year by 2050 for the UK alone.

In reality, costs are likely to be significantly higher than these estimates from models, which assume that policymakers will always identify the best policies (Helm 2008). For example, the capital cost of meeting the 2020 renewable energy target for the UK alone has been put at as much as £100 billion over the next 12 years (Renewables Advisory Board 2008). Reducing emissions from the existing housing stock will cost tens of billions of pounds.<sup>1</sup>

Under the evolving global policy framework, these costs will fall mainly on today's energy consumers or taxpayers (essentially the same people). If the global costs are distributed fairly,<sup>2</sup> as may well be required in order to reach an international deal, then consumers in developed countries will be asked to pay the lion's share.

In the EU, energy consumers are already paying, via increases in electricity and gas prices, for carbon pricing, energy efficiency programmes and the expansion of renewable energy. In the UK, the Sustainable Development Commission recently calculated that consumers are paying on average around £50 per year extra for electricity and £10 per year extra for gas, representing

around £14 billion in total (Sustainable Development Commission 2008).

Across Europe, despite sustained public concern about climate change, there is a strong dislike of environmental taxes (Dresner *et al* 2006). In the UK, while polls show that people tend to think that government has a responsibility to lead on tackling climate change (for example, COI 2006), a large majority (more than 60 per cent) is also consistently opposed to paying higher taxes on flying and driving (YouGov 2007). This opposition can also be clearly seen in public debate (and direct action) on fuel duty and road pricing, and many people now regard environmental taxes as 'stealth taxes' (see the case studies in Lockwood *et al* 2008). Floating voters, who are by definition open to the wooing of political parties, are even more likely than the general population to be uninterested in, if not actually hostile to, environmental issues (Morris 2008).

All of this matters for electoral politics, because people's voting is heavily influenced by their impressions of where political parties stand in relation to issues that they consider important, and their views of how well they think a party will perform on that issue (Whiteley *et al* 2005). Leaders focusing a great deal on environmental issues, which floating voters do not tend to prioritise, risk appearing out of touch, possibly elitist and likely to increase costs (Morris 2008).

Thus, implementing existing climate policies represents a substantial political challenge. However, for some, the latest science means going further still, to a sharp, 'managed' economic contraction in developed countries, at least as significant as the collapse in former communist economies after 1989.<sup>3</sup> If it is virtually impossible to imagine

1. Also important are emotional, psychological and perceived aesthetic costs and the restriction of consumer choice through climate policies. For example, the expansion of renewable electricity in the UK to meet the 2020 target is projected to involve a doubling in the number and an increase in the size of onshore wind turbines (BERR 2008). Such an expansion will be strongly opposed by some people citing deep attachment to the landscape. In addition, consumer 'choice-editing' measures (for example the phasing out of incandescent light bulbs) may conflict with powerful notions of privacy and freedom.
2. According to a set of metrics that recognises either lower levels of per capita emissions and wealth in the developing world or higher levels of consumption in the developed world – see Baer *et al* 2008 and Helm 2008.
3. It is worth noting that the decarbonisation of former communist countries happened mainly through a collapse in industrial output. But many countries in the EU have already lost much of their heavy industry to locations in the developing world, especially China. For such post-industrial economies, a contraction in emissions would have to involve a sharp reduction in the provision of energy services, meaning colder, darker homes and offices, and fewer car trips. This is likely to be particularly difficult politically, since the factors driving recent emissions growth in developed countries are consumers' desires for brighter warmer homes and more mobility.

how such a policy could be carried out in countries in the industrialised world without major political fallout, it is even more difficult to conceive of such measures in the developing world.

In China, for instance, lower rates of economic output and GDP growth due to the current global recession<sup>4</sup> have already been linked with a rise in unrest. Speaking in relation to the impact on production of the current economic downturn, Chinese Human Resources and Social Security Minister Yin Weimin recently told reporters that dealing with labour strife was now his Ministry's top concern. 'Shortly after unveiling the economic stimulus plan, China is now turning its attention to managing the more intractable social fallout from the downturn,' reported the South Asia Analysis Group (2008).

### The limits of environmentalism and 'leadership'

If the pure politics of avoiding climate change are unfavourable to the level of action now necessary, then many in the environmental movement believe that science will trump politics. It is true that both UK and international polls show most people now accept the existence of man-made global warming and express concern about it. But while concern is broad, in most countries it is also very shallow (for example Leaman 2006, Downing and Ballantyne 2007, Ipsos MORI 2008). UK tracker polls show that over the past 20 years environmental concerns are a priority for only a small minority (less than 10 per cent). Other issues – public services, crime and now the economy – matter much more (Clark 2008).

What is striking is that climate change remains a 'background' concern even after milestone events such as the publication of the Stern Review, the Intergovernmental Panel on Climate Change's *Fourth Assessment Report* and Al Gore's *An Inconvenient Truth*.

Indeed, concern about climate change in the US actually *decreased* in the months following the release of Gore's film (Nordhaus and Shellenberger 2007).

Environmental concern is therefore something of a political curate's egg. While people look to governments to act on climate change, this support does not extend to personal sacrifice, thus poisoning efforts to champion the environment at the ballot box. This paradox is likely to become more pronounced in the current economic climate (for example, Bennett 2008).

A second common response is to say that politics is about leadership and that politicians can take decisions based on conviction. Examples from the UK might include Tony Blair's decision to take part in the invasion of Iraq in the face of vocal opposition and even wider doubt, and Margaret Thatcher's aggressive deregulation of the UK's economy in the 1980s. This might be called the 'Nike approach' to climate policy – just do it!

Of course, political vision and determination will be needed, as will cooperation on international climate protection measures. However, many of the examples given by proponents of the leadership approach simply serve to emphasise the unprecedented nature of the problem.

For example, bringing in policies that will influence energy use and costs in homes, on the roads, in the air, in industry and in terms of jobs and economic competitiveness have a much larger impact on voters' daily lives than does a foreign war. By contrast, economic changes, such as those wrought by Thatcher in the 1980s, do have a mass impact. But Thatcherism was possible only because a sufficiently large political constituency in the country perceived there to be an acute problem with the economy and the unions. A similar climate constituency does not yet exist in most countries and may not for some time.

At one level, what underlies both the limited power of the environmental impera-

4. China's GDP growth rate fell from double digits in 2007, to 9.1 per cent in 2008 and may reach a low of 7 per cent in 2009 (UNDESA 2009).

tive and the leadership problem is the nature of climate change. Unlike the threat to jobs or houses in a recession, or indeed unlike a visible local pollutant, greenhouse gases are invisible, odourless, have a diffuse impact over a long time period and do so most acutely in parts of the world that have other profound problems.

## Even where opportunities for political leadership on climate change present themselves, they are often spurned by governments in favour of other (often economic) factors

Even where opportunities for political leadership on climate change present themselves, they are often spurned by governments in favour of other (often economic) factors, as the recent UK Government approval of a third runway at London's Heathrow Airport illustrates. Unlike another analogy often attempted – that with the expansion of Nazi Germany in the late 1930s – climate change is not yet, literally, a clear and present danger in the everyday experience of most people in industrialised and even in developing countries.

### Putting the cart before the horse

Emissions reductions targets and emissions trading currently lie at the heart of climate policy (where it exists) and occupy much of the energy in international negotiations. Many environmentalists have supported the principle of cap-and-trade, because it offers the prospect of a guarantee of climate protection through the cap (although many have been critical of the practice, because caps can and have been weakened by lobbying from vested interests). But choosing cap-and-trade schemes as a starting point for climate policy goes against the grain of the politics, both internationally and domestically.

At the international level, due to the terms of the 1992 United Nations Framework Convention on Climate Change, developing countries are only obliged to take such steps to limit emissions as developed countries are willing to pay for. Since it would mean countries such as India, China and Brazil committing to a new, less advantageous agreement, a global cap-and-trade scheme currently appears politically unlikely. Indeed, emboldened by their experience of resisting disadvantageous agreements at the World Trade Organisation, the group of developing nations negotiating collectively in UN climate talks is resolutely opposed to any formal commitments on emissions.

Leading in international negotiations with an approach based on establishing cap-and-trade schemes – by definition requiring legally robust limits on emissions – is therefore ill-conceived. And yet the EU and other developed countries are currently prioritising cap-and-trade over other areas of the negotiations (in particular the development of low-carbon technology) (ENDS Europe 2009).

The EU's pursuit of cap-and-trade at the international level is understandable, as it has committed considerable political capital to the future of its still young Emissions Trading Scheme (ETS). In the UK, belief in cap-and-trade is more evangelical still, perhaps because it appeals to the Labour government's penchant for target setting. For example, the newly-passed Climate Change Act effectively consists of a set of emissions reduction targets, and a legal framework for creating new cap-and-trade schemes as instruments for meeting those targets.

But this approach to climate policy carries domestic political risks as well as international limits. The fundamental political problem with pricing carbon emissions through cap-and-trade, as maverick US environmentalists Nordhaus and Shellenberger (2007) point out, is that it makes dirty energy expensive, not clean energy cheap. Of course, carbon pricing makes some existing clean technology, such as solar and wind, *relatively* cheap

compared with dirty energy such as coal-fired power, but it does so only by increasing the cost of the latter to the consumer, not by reducing the absolute cost of low-carbon alternatives.

## The environment is, at least until catastrophic climate impacts grip sufficient numbers of people, a murmur in a political arena packed with much noisier issues

In the case of the EU ETS, if it works, the main effect will be to switch power generation from high carbon coal to medium carbon gas, which will reduce emissions, but only by a limited amount. This switch will come at a cost: gas is more expensive and will increasingly be supplied by Russia, exposing the EU to the types of geo-political risk exemplified by this winter's Ukrainian dispute and disruption of supplies.

In its infancy, the politics of the ETS have been largely confined to lobbying from heavy industry to water down the scheme, but this can be expected to change as the cap starts to bite and costs for consumers begin to rise. It is clear that fears about its political sustainability mean that the credibility of the scheme is not yet fully established (Lockwood 2007).

### Putting the horse before the cart (in order that the cart starts to move)

In arguing for a shift of focus away from targets and cap-and-trade schemes, we are not calling into question the science, which clearly shows that there is a deep climate crisis looming. Nor are we arguing against the use of economy-wide targets and cap-and-trade, where appropriate, as instruments of economic adjustment. But for crisis to be averted, policies that reduce the impact of human beings on the climate sys-

tem may have to be rethought and presented on a different basis. The environment is, at least until catastrophic climate impacts grip sufficient numbers of people, a murmur in a political arena packed with much noisier issues.

Conversely, people and politicians might actively turn against climate-friendly policy if it appears likely to cost the earth. This is especially true now, as economic recession reduces the spending capacity of ordinary households, precipitates job losses and devours capital. A much sounder basis for such policy is to be found by aligning climate goals with energy security, innovation, jobs and investment, as politicians worldwide, including President Obama and most leaders in the UK, are rapidly discovering.

The challenge we face is to shape a proactive, ambitious – even visionary – *technology* policy within the aegis of investment in future economic progress, job creation and improved energy security. The last time a broad and major technological effort of this sort was mobilised was during World War II, which saw the development of radar, sonar and synthetic rubber, huge advances in the aerodynamics of aircraft, the atomic bomb and other weaponry, and a massive scaling up in the use of medicines such as penicillin. It is this version of the war-time analogy – of rapid progress and innovation, rather than austerity – which may prove more useful and is likely to inspire people and politicians.

Some will dismiss an approach that gives more attention to technology policy as naïve techno-optimism. George Monbiot (2006), for example, argues that, 'to succumb to hope of this nature is as dangerous as to succumb to despair'. Others argue that innovation can deliver emissions reduction only in the longer term. However, it is our view – and something of a truism – that the extent of the impact innovation will make, and over what period of time, will be heavily determined by government policy. The more active policymakers are, the more likely it is that innovation will offer more politically feasible means to remove the log-jam.

Already, even though incentives for the development of low carbon technologies are only just coming into play, we are seeing rapid change, both in the deployment of existing technologies (for example wind power), and in innovation (for example, in lithium-ion battery technology for plug-in hybrid and fully electric vehicles). These developments have been driven partly by technology policies, such as the UK's Renewables Obligation and Germany and Spain's feed-in tariffs, partly by the expectation of future policies, but also simply by soaring prices for fossil fuels.

International negotiations may also hinge on technology and its transfer to industrialising and poorer economies. Developing countries, including China, have already proposed that a new agreement should include a technology action plan, a formally mandated UN low-carbon technology body and an international technology fund. These countries collectively fear being either locked out of new technological developments because of its cost or becoming guinea pigs for technology that industrialised countries are unwilling to deploy themselves.

If we are to have a giant, ambitious, international technological leap forward, we will need finance on a similar scale. Some in the US are calling for investment on the scale of US\$50 billion a year in low carbon energy technology and infrastructure (The Breakthrough Institute 2009), while the International Energy Agency says that the staggering sum of US\$45 trillion will be needed for energy systems over the next 40 years, even to halve global emissions by 2050 (OECD/IEA 2008).

The financing of low carbon technology needs to be conceived in two parts. The first is supporting innovation – that is, the development of genuinely new kinds of technology – which will be needed to make low carbon energy cheaper than existing energy. An example is so-called 'third wave' solar photovoltaic nanotechnology.<sup>5</sup> A second

part of the picture is financing the deployment of existing, near-commercial technologies (such as offshore wind in the UK), and retrofitting measures, of which carbon capture and storage will be the most important in the medium term.

In the balance between these two areas – innovation and deployment – much more attention and money is currently being paid to the latter than the former. It is important to realise that for the politics of climate policy, spurring innovation to enable climate change policy to better fit the aspirations of people and their governments is going to be more important than funding relatively expensive deployment.

Under current policies, much deployment is being financed through higher energy prices for consumers. This is how the expansion of renewable energy is and will be financed in the UK and across the EU and how the development of carbon capture and storage will be paid for. The main problems with this approach are that it is regressive – the costs fall disproportionately on poorer people – and politically difficult, and will become much more so as the volumes of resources at stake become larger.

An alternative approach comes from looking at the climate problem in a more dynamic way. As US economist Duncan Foley points out, the main beneficiaries from our acting to cut emissions will be future generations, and by mitigating climate change we will raise their welfare relative to what it would be in the absence of mitigation. It therefore makes sense to finance some or even most of our efforts to cut emissions not from current consumption, but by borrowing (Foley 2007).

At a global level, an increase in borrowing for climate change measures will crowd out conventional investment, but this will nevertheless be to the net benefit of future generations to have us invest more in mitigation and less in conventional assets, since economic capital and 'natural capital' are not perfectly substitutable (Dasgupta 2001).

5. See for example, the claims made by Nanosolar, which already has a production facility in Germany ([www.nanosolar.com/technology.htm](http://www.nanosolar.com/technology.htm)). There is still some scepticism surrounding claims such as these, but they are indicative of the kind of breakthroughs that could be made.

It would therefore make sense to be focusing a large part of the debt-financed stimulus packages underway in various countries and available sovereign wealth around the world on low-carbon innovation in particular.

Debt-based financing may also help with the politics of North–South financial transfers, which will be needed for an effective, international approach to technology. Without these elements, a deal – at least one that actually facilitates national efforts to reduce emissions – is unlikely to be reached at the UN Climate Conference in Copenhagen, scheduled for December 2009.

The sums involved will be substantial and certainly larger than the current overseas aid budgets. But to escape the cycle of politically-driven aid, developing countries are already arguing for obligatory transfer mechanisms, which would clearly improve matters for recipients, but would create a significant political problem for governments in industrialised countries if the money is to come from current budgets.<sup>6</sup>

As we approach the critical Copenhagen talks, another Groundhog Day looms. There is every chance that the current lack of trust in negotiations and the panic among governments in the face of a much more immediate economic crisis will precipitate a nightmarish re-enactment of Kyoto, in which the agreement of something that falls short by all measures is subsequently reneged upon. To break the cycle – to end the nightmare – a radically different approach is needed that focuses on arming humanity with the tools it requires to fight climate change rather than forever chasing targets that disappear over the horizon with equal velocity.

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6. See, for example, the recent statement from the International Forum on Globalization, to which all the major civil society groups have signed up (International Forum on Globalization 2008).

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