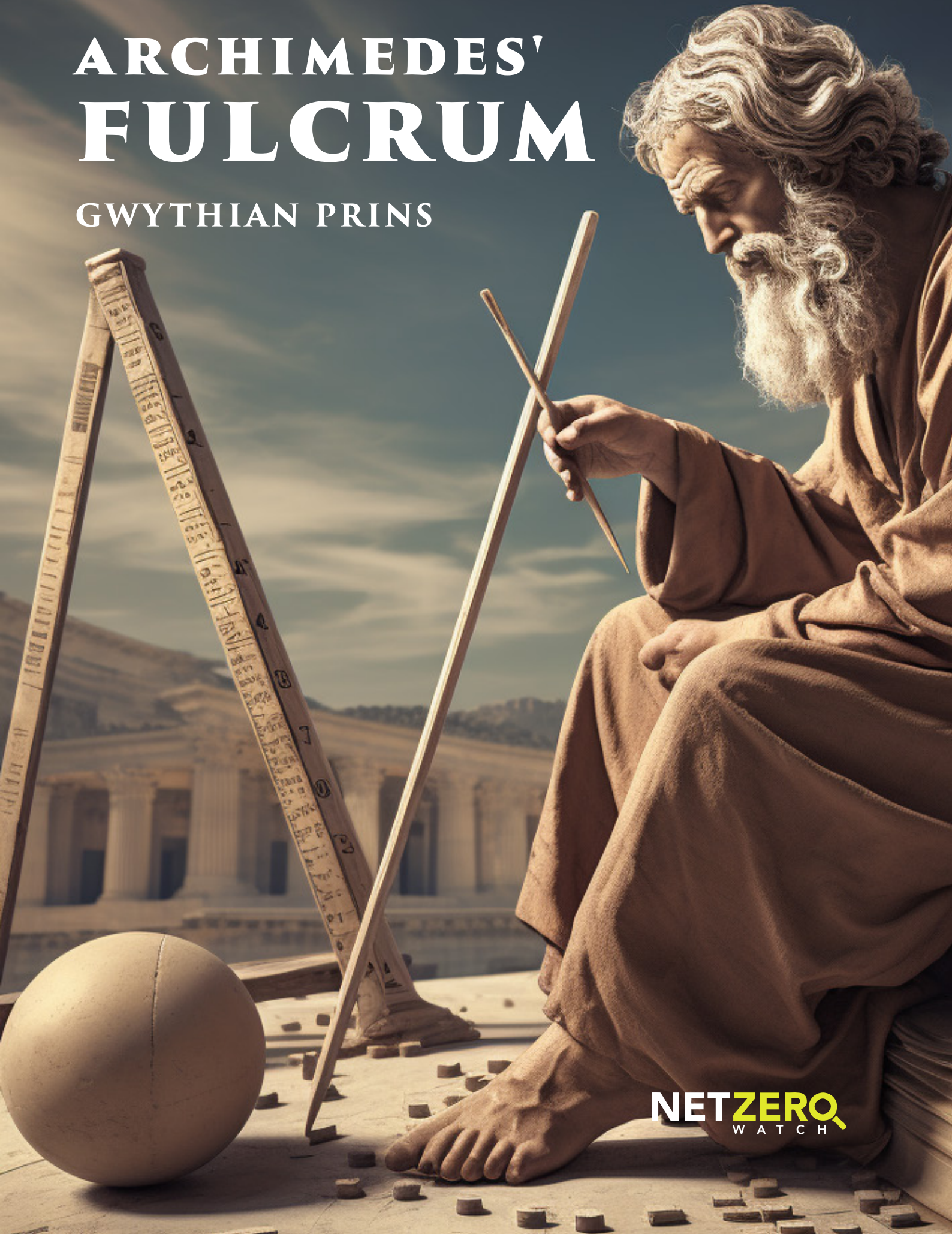


# ARCHIMEDES' FULCRUM

GWYTHIAN PRINS



**NETZERO**  
WATCH

**Archimedes' Fulcrum**  
Gwythian Prins

© Copyright 2023, Net Zero Watch



## Contents

About the author	iii
Foreword	1
Summary	2
Archimedes' fulcra, past and future, discussed here	3
Political and cultural contexts	5
Human rights, and the European Convention	6
'Net Zero' and true stewardship of the environment	8
Why taxonomy comes first	9
Blinkers off: what do you know about HTHH?	12
The automotive consequences of Mr Johnson	13
Intertemporal Jellybyism	14
We lead, no-one else follows	15
The potential consequences of Mr Sunak's pragmatism	16
The second fulcrum	17
An energy transition as if the environment really mattered	18
Beyond the threshold	23
Conclusion	23
Notes	24

## About the author

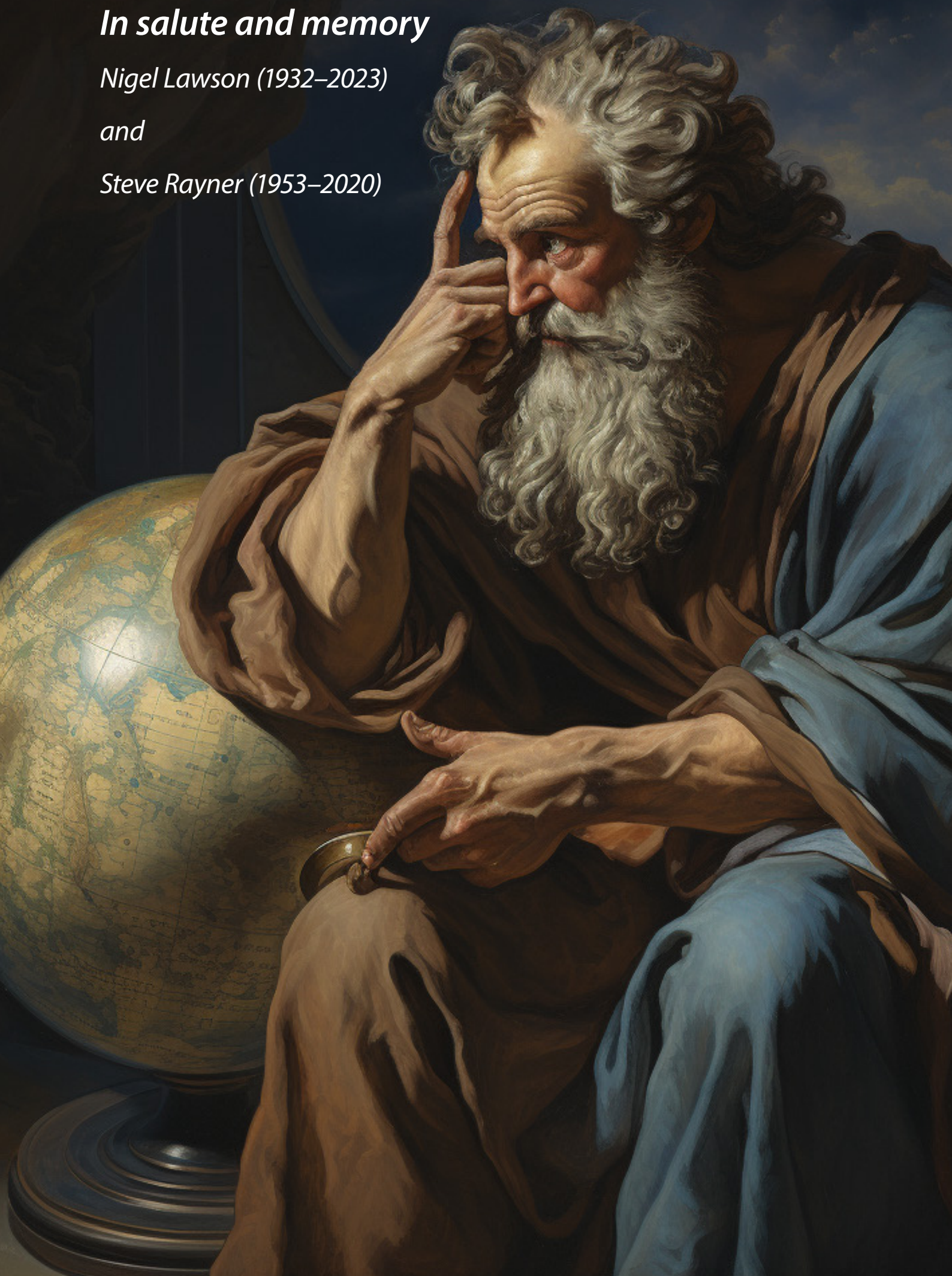
Professor Gwythian Prins is Research Professor Emeritus at the LSE, where he directed the Mackinder Programme, 2002–13. He was convenor of the Hartwell Group on Climate Change and Energy 2007–19, and has served as adviser to both the Japanese and (former) Czechoslovak governments on energy and environment issues. Before that he was the first security consultant to the Hadley Centre for Climate Predication and Research at the Meteorological Office, loaned by the Defence Evaluation and Research Agency of the MoD (1999–2001). Afterwards, he was a member of the Chiefs of the Defence Staff's Strategy Advisory Panel. During his early career, he was a fellow in history at Emmanuel College and university lecturer in politics at the University of Cambridge. He is currently editing *Geopolitics for Hard Times: A New Cold War*. He wishes to acknowledge the helpful peer-review comments of others, while absolving them all from any errors or omissions, which are the author's responsibility alone.

*In salute and memory*

*Nigel Lawson (1932–2023)*

*and*

*Steve Rayner (1953–2020)*



## Foreword

This essay and its companion predecessor, *The Worm in the Rose* (2021) had their intellectual origin in 2007–8. Around the turn of the century, I had been working and writing independently and in the defence research community on many aspects of global climate systems and human responses to them – both analytic and practical. The more I delved, the more the facts changed my mind; not towards embracing new certainties, but towards creative doubt. In my small team of bright young people in the Defence Evaluation and Research Agency, we had a particular interest – which has been for me an abiding one – in the problem of policymaking in contexts of imperfect knowledge and deep uncertainty, and we ultimately developed ‘thinking aids’ for such situations. Global warming, global climate change and human responses to them were a good case study. After my return to the academic world, and in the congenial setting of the London School of Economics, I continued this work in the spirit of Sir Halford Mackinder, its second director, and in tune with its motto: *rerum cognoscere causas* (to know the causes of things).

In January 2007 I was invited to a workshop at the University of Oxford by an acquaintance, who had previously been a member of the famous Shell Scenarios Team, and there I met for the first time the founding director of the Science and Society programme within the university’s Martin School, which had opened in 2005, and in which he had played a formative role. Steve Rayner and I instantly hit it off, and rapidly agreed to begin working together, and discussed a potential collaboration between our two institutions too. Our 2007 joint paper *The Wrong Trousers: Radically Rethinking Climate Policy* was the first fruit. Rayner introduced me to former colleagues in the USA: from the Breakthrough Institute in California, and Arizona State and Colorado universities. As well as leading to a major joint *Nature* paper in 2007, some of these collaborations formed the kernel of the Hartwell Group on climate and energy, which I convened after a request to deliver briefing support on the subject to the G7 heads of state.

Then, one day in 2008, I received a telephone call from the late Nigel Lawson – Lord Lawson of Blaby – asking if I would mind reviewing a

substantial revision for the paperback edition of his best-selling 2008 book *An Appeal to Reason: A Cool Look at Global Warming*, which remains to this day one of the most lucid short reviews of what has become one of the most misunderstood and rancorously divisive topics of the past two decades. This I gladly did. We met and discussed it several times. Nigel had read and incorporated almost all the themes that we collectively had published in 2007, particularly on the priority of adaptation to climate change; but his main target was elsewhere. The book is principally a lacerating dismissal of the Stern Review on the economics of climate change (see below). Nigel’s book pre-figured several of the thematic approaches in this paper at a time when they could make little or no headway in public discourse. Now that the Overton Window has shifted decisively, they can.

Nigel founded the Global Warming Policy Foundation, of which Net Zero Watch, by whom this essay is published, is an offshoot. Steve and I and our group continued together in various combinations. In 2015 he co-edited the compendium volume of Hartwell precursor and actual papers with my former LSE colleague Mark Caine (*The Hartwell Approach to Climate Policy*). His untimely death from cancer robbed us all of a brilliant and brave mind. This paper is published shortly after Nigel Lawson’s death, full of years, and rich in his many contributions to British life. Many remember him as the most consequential Chancellor of the Exchequer of modern times and as an effective Secretary of State for Energy; but as Prime Minister Sunak licenses at last the resumption of proper analysis and the weighing of opportunity/costs on ‘Net Zero,’ to which this paper is a contribution, Nigel’s shadow looms large.

I have debts of friendship and of the mind to both Nigel and Steve, and so this paper is a salute to their memories and pioneering work

Gwythian Prins  
December 2023

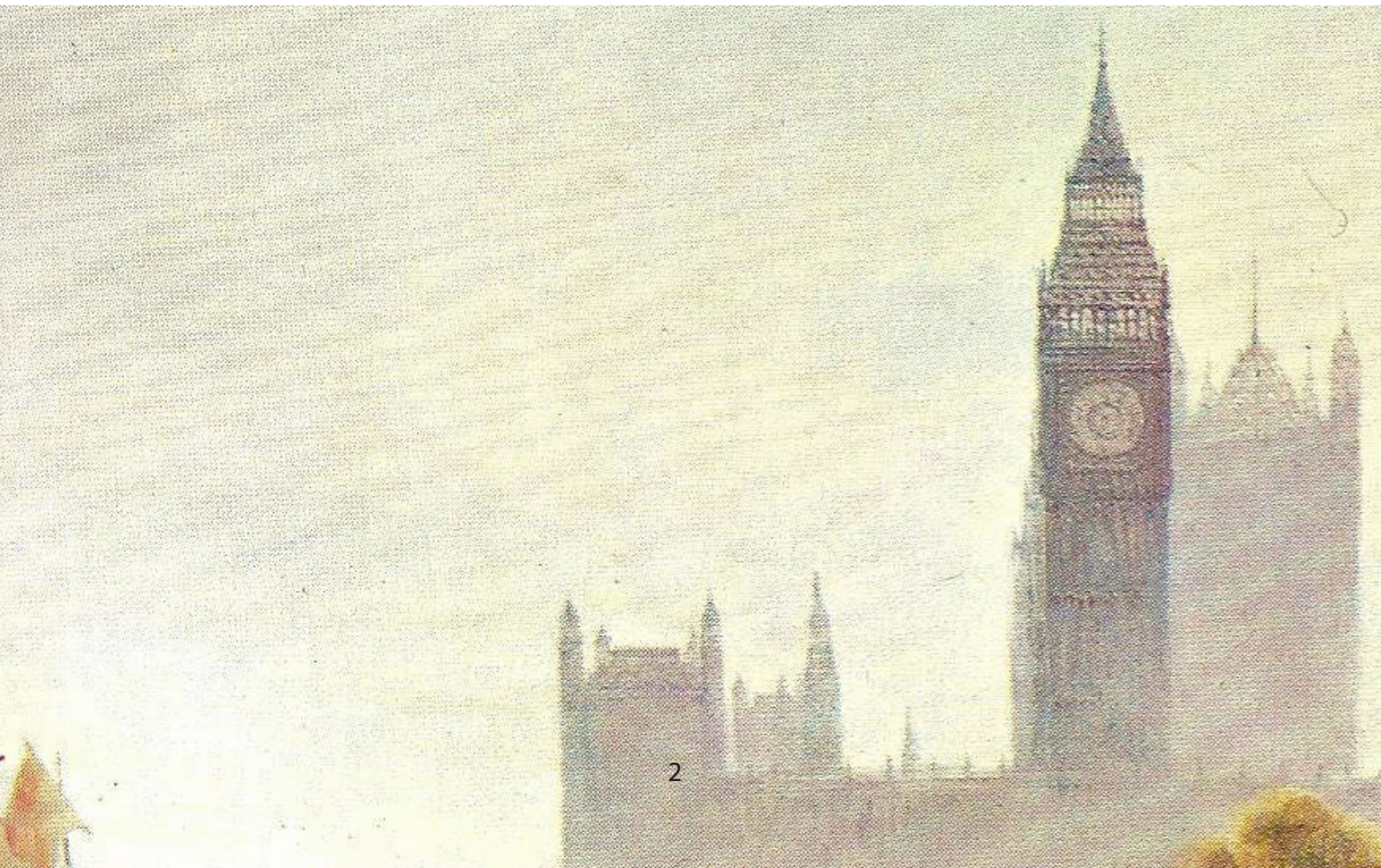
## Summary

The Overton Window regarding what is politically feasible, has, with respect to 'Net Zero', been shifted significantly by two events. Domestically, Prime Minister Sunak's slight relaxation of his predecessor's casual ban on petrol and diesel cars has licensed long overdue conversations. Globally, the pogrom of 7 October 2023 has moved the world from the first to the second phase of a developing 'hot' (kinetic), 'cold' (economic) and 'grey' (subversive) world war, encompassing different interactive theatres and types of pressure. Luxury beliefs such as Net Zero can no longer be afforded at the moment that the State and society are purging themselves of the recent moral disarmament, which has in part, in 'grey' war, been encouraged by active measures by our enemies among the dictatorships, north, middle and far eastern. This paper leads the way through that Overton Window.

'Net Zero' derives from a first-order doubly-defective theory of knowledge. In consequence of that, it is built upon six fallacies. It also embodies a vitiating second-order technical error. Therefore, it can never be achieved. There is no 'green transition'

backwards from dense stocks to thin flows of energy – nor can be – and it would make no difference to global climate systems if there were; but attempting to achieve one by legislated coercion leads to environmental, social and economic mayhem.

The harder Net Zero is pushed, the more it fails; and in its failing the more it brings the noble causes of environmental stewardship and human flourishing into disrepute. It actively damages the natural world: the reverse of its aspiration. It has become more a religion than a rational policy. There is similarity with how the European Convention on Human Rights (ECHR) brings the concept of human rights into disrepute. In both cases, actions pursued are intrusive, banal, highly contentious, and far from fundamental, as they claim to be. In both cases, the radically ambitious solution is the same. Finding an Archimedes' Fulcrum – shown here for each case – will allow the most damage to be averted by the smallest action. The paper includes an unrelated other example as an illustration of this general principle.



## Archimedes' fulcra, past and future, discussed here

*Fulcrum No 1:* Under Art 58(1), on six months' notice, formally denounce the European Convention on Human Rights (ECHR). If necessary, in consequence of the Supreme Court's 'Miller One' judgement, which curtailed prerogative powers of the executive, publish and whip a one-line Bill through Parliament authorising the executive to act as Art 58(1) prescribes. As Lord Sumption recommends, and where necessary, inscribe into British Statute Law any rights that we do not already have and which, as a free and sovereign state, we actually want. There may be none. The main point is to remove any vestige of power of the over-reaching and irreformable Strasbourg Court in this kingdom. Denunciation has the effect of preventing 'lawfare' via the European Court of Human Rights.

*Fulcrum No 2:* By all necessary Parliamentary action, be it a statutory instrument (SI) or a one-line bill, cause the deletion of all reference to 'targets' in the 2008 Climate Change Act and in the 2019 SI-enabled May Amendment, which tightened the original carbon dioxide reduction target – 80% by 2050 – to 100% (so-called 'Net Zero'). Substitute

the word 'aspiration.' It will follow from this that all instruments enforceable under 'targets', such as 'carbon budgets', will fall away, as also will all quango bodies, such as the campaigning Climate Change Committee. Neither have a role in the pursuit of an aspiration. These secondary deletions of bureaucratic organs can be activated in an appropriately drafted SI.

*Fulcrum No 3:* In December 2020 the then Vice Chancellor of the University of Cambridge attempted to bind the university to the 'respect' agenda, which is a recipe for perpetual grievance and victimhood cultures. When placed before the Regent House, a philosophy professor moved a single word amendment, replacing 'respect' with 'tolerance'. It was an Archimedes' Fulcrum because, with the force of an 86.9% majority, the grievance and victim culture was doubly disempowered. 'Tolerance' removed grounds for 'woke' lawfare and also removed grounds for the taking of offence.







## Political and cultural contexts

British political culture and practice are currently gripped by tentacles that seem to defy all political will and effort to detach them. By tenacious inertia – and unless you are very rich or very masochistic or very authoritarian – they are simultaneously making most peoples' lives nastier, colder, more expensive and fundamentally less free; and this is happening under a Conservative government, hemmed in helplessly, it would seem, by the comprehensive consequences of Blair & Co's Long March through the Institutions. How to escape?

The Overton Window of what is politically feasible moved considerably in late 2023.<sup>1</sup> Domestically, Prime Minister Sunak's slight relaxation of his predecessor's thoughtless ban on internal combustion engines (ICEs) in the UK has licensed long overdue conversations. Globally, the pogrom of 7 October 2023 has moved the world from the first to the second phase of a developing cyber and information ('grey'), economic ('cold'), and, in the Ukraine and Middle East, kinetic ('hot') world war, of differently interacting theatres and types of pressures. Luxury beliefs such as 'Net Zero' can no longer be afforded. This paper leads the way through that Overton Window and, as we move, Archimedes can help.

Unrelated to his bath-time 'Eureka!' moment, Archimedes made another striking observation: 'Give me a lever long enough and a fulcrum on which to place it, and I shall move the world.' This is the essence of all great successes in politics and war: to identify and to move the least in order to change the most. Drenched and bewildered as we are by today's torrent of misplaced activity, which mistakes legislation and hyper-regulation for action in the real world – supremely the case with the vexed issue of climate change and 'Net Zero' – this simple and well proven maxim is more honoured in the breach than the observance.

In the ruling classes, mainstream managerialist politicians, no longer strongly differentiated into party platforms, are yoked with highly politicised civil servants and associated academics and activists. This bland, yet self-empowering and strongly passive/aggressive elite interprets its mandate 'aristocratically', in the literal sense, as Plato's Guardians interpreted theirs. They know

best. On everything. Their ruling orthodoxies run from the assumed 'error' of Brexit, to the causes of and remedies for climate change, the dominion of one expression only of institutionalised human rights, permissible views on gender dysmorphia, a comprehensively racialised caricature denigration of our history and, since 7 October 2023, the overt expression of 'Israelophobia' – the newest form of the oldest hatred.<sup>2</sup>

Together, these topics comprise the 'woke' agenda. Any dissent from it is treated as apostasy and is therefore suppressed and silenced with the zeal of the witchfinder. Orwellian powers of 'cancellation' are deployed to this end, frightening in scope and effect. Naysayers live in fear for their livelihoods and therefore tend to simmer in silence. Norman Cohn's *Pursuit of the Millennium* supplies a thought-provoking long view of such self-maddening cult-like conduct.<sup>3</sup> Historically, the pattern is quite familiar, even if the form is shaped by the electronic age. However, as we transition from times of peace to times of war, even although some are deeply toxic, these are all luxury beliefs: they are the leisure of the theory class. Circumstances are rapidly extinguishing the grounds for tolerating them, with consequences explained below.

FDR was right. We really have nothing to fear but fear itself. Yet until this constitutional disobedience by the 'Bland Blob' ends, *plus ça change, plus c'est la même chose* for ordinary voters. When voters among the silent people have spoken and voted to break the arm-lock of the political consensus that has held sway since 1997, as they did in unprecedented numbers in 2016 and 2019, they have always got the same continuities in practice; or they have up to now. However, there is a bat-squeak of possibility that things might change, even at this late hour in this Parliament and even despite the worrying decision to recall Lord Cameron. His poor judgement on Europe and especially on Communist China, compounded by his post-parliamentary career engagements, will baffle those 2016 and 2019 voters as much as it concerns the former Chief of the Secret Intelligence Service who observed that his appointment raises questions but gives no answers, and that his foreign policy legacy was not glittering because he got

those two major things so badly wrong.<sup>4</sup>

Nothing could be more destructive of trust in, or respect for, politicians than wedge-driving by Bland Blob United. 'Wedge-driving' is a familiar political tactic that seeks to divide and rule as a way of evading democratic mandates that the Blob does not wish to accept or to deliver. In the main, resistance among voters has curdled into sour and sullen silence, and thence into mass voter abstention. This was quite clear in, for example, the vertiginous Conservative by-election loss of the Tiverton and Honiton constituency in June 2022. That pattern was reconfirmed in the epically worse results at Tamworth and Mid Bedfordshire in October 2023, which revealed that large majorities of those who voted for change in the 2016 referendum and 2019 election stayed away. But latterly, increasingly, contempt is reciprocated and begins to erupt in direct action, as it has already done in France, in the shape of the *gilets jaunes*, and, of much more telling significance, in Europe's other old and mature democracy, the Netherlands, in the

shape of the *BoerBurgerBeweging* (BBB) and now the unexpected and remarkable breakthrough support for the *Partij voor de Vrijheid* (PVV).

Any one divisive policy can be fought by direct action in its own terms. Mayor Khan's so-called ULEZ zone, part of his war on motorists, is an example, prompting the 'Blade Runners' to destroy or disable his enforcement cameras, to much popular acclaim. But any number of tactical victories cannot be strung together into a strategic victory. That demands a quite different approach, stepping back and stripping the problem, both theory and practice, down to the bare essentials which, if neutralised, will deliver victory.

In the case of 'Net Zero' there are fatal flaws in the theory and implementation of knowledge upon which the entire edifice is built and there are two essential animating instruments: an Act of Parliament and one Treaty obligation. Find fulcra to move these, and the capsized political world could be righted with surprising speed. The Treaty is where we should begin.

## Human rights, and the European Convention

Lord Sumption, the polymath star barrister, Supreme Court judge who far outshone its President, and a historian of the Albigensian Crusade and the Hundred Years' War, published an essay of capital importance in *The Spectator* on 30 September 2023.<sup>5</sup> It states the reasons why, as is our perfect sovereign right, the United Kingdom should withdraw forthwith from the ECHR and thus from the authority of the Strasbourg Court. His arguments are definitive and two are surely decisive.

The first – in two halves – is that there is nothing that is done under the Convention that cannot be enacted in ordinary domestic legislation. Many of the rights delineated have long been ours by right and were justiciable under Common Law well before the ECHR was conceived: 'We can have whatever rights we want *if there is sufficient democratic mandate for them*,' he observes.<sup>6</sup> Emphasis is added, for the dark obverse of this coin is as important. The purposes of the Convention, as interpreted by the Strasbourg Court, are positively antithetical and an affront to our sovereignty (emphasis again added): '...to make us accept rights *which we may not want and for which there*

*may be no democratic mandate*'

In the words of Rousseau's Saw, there is nothing more difficult in all of politics than to obtain fully legitimated consent for actions. The present author first argued in 2015, amplified in 2018,<sup>7</sup> that gaily scorning this requirement is the original sin of the European project, developing that case through interpretation of historical and cultural evidence viewed through the prism of Joseph Tainter's theory of the collapse of empires.<sup>8</sup> Since 2018, the EU 'project' of federal union has continued to disintegrate in line with Tainter's theory. Its inherent authoritarianism made it, *ab initio*, indigestible for free-born Englishmen and women, who are little different from their forebears, and to whose pluck and cultural self-confidence we owe modern freedoms, the abolition of slavery, the *pax Britannica* and the progress of democracy and prosperity worldwide since British victory in the Seven Years' War: 'Come, cheer up, my lads, 'tis to glory we steer, to add something new to this wonderful year'. Contrary to the groupthink within the Foreign, Commonwealth and Development Office, we have little to apologise for in our world-changing

imperial history, compared to most other countries; and those who believe otherwise should do their history homework better.<sup>9</sup>

That democratic deficit leads us then to Lord Sumption's second main argument – his central charge – which he makes with an authority and acerbity that is both stinging and urgent: 'Under Article 32 the European Court of Human Rights is the sole judge of its own jurisdiction'. It can and it does gobble fresh powers by breaching the fundamental principle of territoriality – as in pursuit of British soldiers over alleged war crimes in the middle east – and, as in the Rwanda cases, 'claiming the right to impose binding interim orders on state parties before the arguments have even been heard'. It is all intolerable.

The Court's judicial overreach is gross. Lord Sumption details promiscuous misuse of the notorious Article 8 on the right to private and family life; in itself unobjectionable, but malevolent in its overextension. He draws special attention to the proclamation in 1978 by the Strasbourg judges of what they called 'the living instrument doctrine'. Under this interpretation, they give themselves permission to roam in their imaginations to recognise new rights 'in the spirit', but nowhere in the black letter text, of the Convention. Within the parallel universe that inhabits the Court's strangely modernist building in Strasbourg, this innovation is presented on its website as a matter of evident pride.

But you simply cannot do that. For this high road leads to perdition: to the current position where the Court claims such breadth of powers that it collides with and constrains the freedoms and powers of elected parliaments. Lord Sumption's conclusions are therefore as severe as is possible. They underpin more operational objections, valid as they are:

...the ECHR has devalued the whole concept of human rights. It has transformed the convention from a noble body of truly fundamental principles, almost universally shared, into something at once intrusive and banal. It has become a template against which to assess most aspects of the ordinary domestic legal order on principles which are highly contentious and far from fundamental.

In consequence, he has changed his previous view and now regards the Court as unreformable. Hence, on all these grounds the UK should denounce the ECHR forthwith.<sup>10</sup>

The objection that this is in any sense retrograde is already dismissed: all power is in our currently nerveless hands. All that lacks is courage and will. The importance of grounding our withdrawal on the first-order arguments in Lord Sumption's essay and not on any second- or lower-order reasoning is patent. The immediate benefit of, at a stroke, preventing the lawfare employed nowadays by many cloth-eared single-issue activists, is obvious. By direct effect it applies to those seeking to defend Net Zero by these means. It also heals the injuries to the authority of the High Court of Parliament. The simplicity of obtaining all this benefit through the application of force at this one fulcrum of withdrawal means it is politically feasible.

It is Archimedes' advice to apply all effort to the fulcrum once identified. In the case of the ECHR, this single action would have far-reaching effects in reshaping the terms of engagement across the spectrum, because the perversion of 'human rights' is now routinely being leveraged to deny the power of democratic mandate in many areas.

In party-political terms it must be obvious to the Prime Minister's advisers that denouncing the ECHR before the next election impales opposition parties on the horns of a frightful dilemma, and at all levels of politics. Were those opposition parties and politicians to gain power, would they rejoin to appease their activists, and thereby alienate many more people – and potential voters – who can see how the ECHR has been used, for example, to frustrate all efforts to control illegal immigration? Or would they accept the *fait accompli* and risk fracture and friction within their own ranks, and the fury of the human rights lawfare industry at the Bar and in charities?

While imperative in itself, denouncing the ECHR would also open the door to further essential corrections of performative actions that have devalued other noble causes, notably that of responsible and pragmatic stewardship of the environment.

## 'Net Zero' and true stewardship of the environment

'Net Zero' is now a thunder-head, darkening and confusing the entire political sky. Yet it only rose above the political horizon during the dying days of Mrs May's tenure in Number Ten.

She was, of course, the unintended prime minister. Her period in office was devoid of positive achievement. Her officials (Olly Robbins, reportedly now an adviser to the Labour party, foremost among them) and her own energies were mainly applied to frustrating Brexit. What – apart from this shabby record – would be her legacy? Two perverse and ill-considered initiatives were quickly cobbled together to become such. The Modern Slavery Act was destined to produce entirely counterproductive effects, and 'Net Zero' even more so.

Net Zero was brought into law by the device of a Statutory Instrument to amend Ed Miliband's Climate Change Act of 2008, which, in Lord Lawson's opinion '... may well go down in history as the most absurd piece of legislation any British Parliament has ever passed', so grotesquely mismatched were the legislated powers to the nature of the topic.<sup>11</sup> Nonetheless, with enthusiastic all-party support, it had legislated for an 80% reduction on 1990 levels by 2050. May's contribution was to ratchet up that legal target to 100%: 'Net Zero'.

The target is wrong both in its ambition and its mode of action. King Canute well understood that even kingly powers could not command the tides. 'Net Zero' is a catchy slogan, devoid of operational detail, but filled with unintended actual consequences. These all need to be unpacked through examples if the public is to understand the implications.

In those frantic days, MPs who were trying to respect the will of the people were fully preoccupied, striving to protect Brexit from evisceration by Mrs May's 'Withdrawal' Agreement, which was, in fact, a charter for perpetual subjugation. In consequence, the new Net Zero target was waved through Parliament, just like the 2008 Climate Change Act before it, with insufficient thought and scrutiny – or any at all. From the point of view of the hard-core advocates of eco-lawfare, who have little truck with democracy, it was cleverly done.

Finally alive to the enormity of what Net Zero implies in terms of self-harming costs to the

economy, as much as to civil peace, many prominent MPs now candidly admit that the Net Zero statutory instrument simply wasn't noticed. Still less, it seems, was it understood in any thermodynamically or economically competent way, not even by its advocates. It was, in fact, just a 'virtue signal', suffused with a glow of goodness, which made it hard to oppose without a serious minimum level of understanding; and since that was lacking, it wasn't. As with the ECHR and human rights, it was an unforced error, with an impact – borrowing Lord Sumption's apposite words from that other context – that was intrusive, banal and highly contentious.

But will Net Zero do what it promises? How will it do it? At what opportunity/cost? More fundamentally, can it be done at all? Assuredly not.

Net Zero is built upon six fallacies,<sup>12</sup> and one of the most egregious is that it is simply 'illegal': it is in breach of the laws of thermodynamics, which, unlike laws of man, no amount of bluff and bluster can override.<sup>13</sup> The German *Energiewende* provides a case study of astonishing economic self-harm. This programme of excess renewables installation, alongside inadequate system balancing capacity and wholesale nuclear decommissioning, wrecked the integrity of the German electricity grid.

'I know the tune, I know the words, I also know every author// I know they secretly drank wine, while publicly preaching water', wrote Heinrich Heine in two well-known and topical couplets from his 1843 ballad *Deutschland. Ein Wintermärchen*.<sup>14</sup> Once these inconvenient truths became impossible to ignore, Germany's attempted road to recovery has been typically hard-headed. A fast return to firm supply, using new, state-of-the-art coal-fired power stations is now being prepared, and older ones are being resurrected from mothballing. Wisely, these had not been blown up, as Sir Alok Sharma, the Chairman of COP26, had done in the UK, with evident – almost religious – delight: *écrasez l'infâme*. Coal is neither evil nor good: it is just coal, the indispensable stock of latent energy upon which the modern world was built and still largely stands.<sup>15</sup> But Germany has, in the meantime, lost its industrial crown to Poland, where thermodynamically sound energy policies, based on a

coal-to-nuclear strategy, have prevailed (and look set to remain in place into the future, despite the recent advent of a left-wing government).

Despite the impossibility of the project, the term Net Zero is now omnipresent. It is trumpeted endlessly by politicians, pundits and journalists who understand not the first thing about it and erect it into a shibboleth full of sound and fury, signifying nothing.

Eco-zealots have cemented the target into their quasi-religious dogma, and have fought strenuously to prevent any *post hoc* questioning of the wisdom of the target. Until recently they have been successful in this regard, but also lucky.

Boris Johnson, Britain's fallen Ozymandias, was the most tragic yet consequential prime minister since Blair, and the most consequential Conservative prime minister since Thatcher. His quicksilver mind and golden tongue could, on his own admission, change course like a wobbly supermarket trolley; and they executed just such a somersault on these 'green' matters when he and the country were felled by the Chinese pandemic in April 2020.

His previous view of the potential of wind power (a view which is thermodynamically correct) was that it 'couldn't pull the skin off a rice pudding'. However, after recuperation from severe Covid during the summer of that year, by the autumn the message had changed entirely. Britain was to become 'the Saudi Arabia of wind'.

Worse was to come. One must assume that it was with an eye on the forthcoming COP26 UN Climate Conference, which (unfortunately) Britain was to host in Glasgow in October 2021, that the Prime Minister announced in mid-November 2020

## Why taxonomy comes first

23 June 1988 was a hot day in Washington when, in testimony before Congress, James Hansen championed the 'control knob' hypothesis, in which atmospheric carbon dioxide levels are held to be closely coupled to temperature. He stated this to be a virtual certainty. Since then, knowledge has advanced considerably, most especially in understanding how misleading computer models that privilege that hypothesis have been.<sup>18</sup>

Taxonomically, the climate is in a special

category of self-adaptive complex adaptive systems, with myriad, strong cybernetic feedbacks.<sup>19</sup> It is not, therefore, safely amenable to weather-type computer predictive modelling. In the specialised vocabulary of applied epistemology, the climate is a 'wicked' problem.

that, just like any communist command economy might do, the UK would *ban* by 2030 production in Britain of internal combustion engines – the thrumming heart of any modern economy – and sale of new vehicles thus powered. The felt need for eye-catching announcements has always afflicted COP host countries. But 2030 was a date plucked from the air. And was this posturing cost-free? Look and learn.

On 2020 government figures, 68% of journeys to work were by road and 79% of freight was road-hauled.<sup>16</sup> Similarly, 94% *and rising* of all surface freight on the planet, both by land and by sea, is powered by diesel engines, operating at remarkable efficiencies: slow-turning marine diesel engines achieve close to 50%; only combined cycle gas turbines in stationary use do better (60%). As a baseline, Newcomen's steam engine at the start of the eighteenth century had around 1% efficiency.<sup>17</sup>

So, even if turning our transport system inside out by government fiat helped the environment – and it doesn't – the 'ban' is magical thinking, verging on the delusional, and an irresponsible misuse of executive powers. It shows how policymaking on this topic, which claims to be 'evidence-based', is the very opposite. For those of us who have been close to these issues for decades, it is more ironic still, for even the premise on which a requirement to decarbonise is based is fundamentally flawed. Hitherto, the case against 'Net Zero' has been made mainly in terms of economic dis-benefits and illiteracy. Now that war has returned and luxury beliefs must be jettisoned, it is necessary to explain why these unworkable solutions are non-solutions to a misconstrued problem.

A 'wicked' problem is in contrast to a 'tame' problem and it is unbounded. It has no definitive formulation. It has no 'stopping rule,' meaning it is not possible to say at what point one has

Box 1: 'Wicked' and 'tame' problems: key differences

'To apply the logic and procedures applicable to "tame" problems to "wicked" problems is a fundamental category mistake in choice of theory of knowledge.'

<i>Tame</i>	<i>Wicked</i>
Bounded	Unbounded
Can be precisely formulated	No definitive formulation of problem
Self-evident stopping points	No 'stopping rule' on data collection
'True-false' solutions – scientific criteria	'Good-bad' solutions – ethical criteria
Waypoint and final tests possible	No immediate and no ultimate test
Trial and error by repeated experiment	Interventions are always 'one shot'
Definable sets of possible solutions	No enumerable set of possible solutions
Hypothesis refinement by iterative Popperian falsification normal	Hypothesis refinement by iterative Popperian falsification not possible
'Tame' problems inhabit rich classifications	Every 'wicked' problem unique and can be seen to be a symptom of another
Start-point value judgements more contestable	Choice of explanation prescribes the nature of chosen optic and that in turn the choice of putative solution
No negative reckoning for Popperian falsifiers conducting iterative experimentation: the contrary	Those making interventions are not granted the right to be wrong by those affected by their 'one shot' actions

gathered sufficient evidence to be able to stop and confidently turn to drafting policies to mitigate the problem by deep interventions. Solutions to 'wicked' problems are not 'true-false' but 'good-bad'. There is no immediate and no ultimate test of any solution and interventions are always 'one shot' because they irremediably alter the context intervened upon. Therefore trial and error is not possible. There is no enumerable set of possible solutions. Every 'wicked' problem is unique and every 'wicked' problem can be considered to be a symptom of another. Furthermore, and especially so in the global warming case, the choice of explanation prescribes the nature of chosen optic and that in turn the choice of putative solution. For all the above reasons, those making interventions are not granted the right to be wrong. Hence

...planners are liable for the consequences of the actions which they generate; the effects can matter a great deal to those people that are touched by those actions.

Interveners on 'wicked' problems are not granted the immunity from blame of error granted

to those whose hypotheses are proved false in addressing bounded, 'tame' problems under Karl Popper's logic of scientific discovery where clear falsification is possible, narrowing the focus, and thus a route to progress in understanding. To apply the logic and procedures applicable to 'tame' problems to 'wicked' problems is therefore a fundamental category mistake in choice of theory of knowledge: an epistemological error.<sup>20</sup>

Since the choice of explanation prescribes the nature of chosen putative solution and since computer simulations of the climate are central in the suite of methods of analysis used, a second category mistake producing a second error in the theory of knowledge routinely occurs. Computer simulations produce *projections*: views of possible futures delimited by their starting assumptions. Yet politicians eager for grist to the legislative mill are routinely prone to take *projections* as firm *predictions*. Meantime, scientifically illiterate eco-zealots set such projections, mis-described as predictions, in stone. These are cemented with claims along the lines of 'x% of scientists can't be wrong: "the science is settled"'. By these mis-matchings,

both groups use a doubly defective theory of knowledge. By so doing, they commit what Alfred North Whitehead named the ‘fallacy of misplaced concreteness’.<sup>21</sup> As he famously observed, ‘not ignorance, but ignorance of ignorance is the death of knowledge’.

In the view of Peter Thiel, founder of PayPal and Palantir Technologies and simultaneously one of the world’s most successful entrepreneurs and disruptive thinkers, this corruption of ‘settledness’ is a facet of a general crisis in modern western science. Examples of the problem are rife in the most prominently politicised fields, of which the study of global climate systems dynamics and of ‘Net Zero’ are probably the best known. But Thiel maintains that the rot goes much further. In his 2023 Scruton Memorial Lecture in the Sheldonian Theatre at Oxford, he argued that even seemingly cerebral areas in theoretical science, such as string theory, have been contaminated by the manner in which modern research is bureaucratised, funded and subordinated to other agendas often set by hum-drum bureaucrats.

Aware of the closeness of scientific and religious imagination (an exploration pioneered by Arthur Koestler in *The Sleepwalkers*, his history of cosmology), the applied philosopher Mary Midgley wrote tellingly in *Science as Salvation* of ways in which the public appetite for myth comes to be filled; and Peter Thiel breaks new ground beyond that.<sup>22</sup>

But it gets worse. These conceptual errors have been compounded within the deployment of computer modelling by a technical framing error of consequence regarding the assumptions made about future carbon dioxide emissions.

When the Intergovernmental Panel on Climate Change (IPCC) presented its set of Special Report Emissions Scenarios (SRES) baseline scenarios in 2000, it stated:

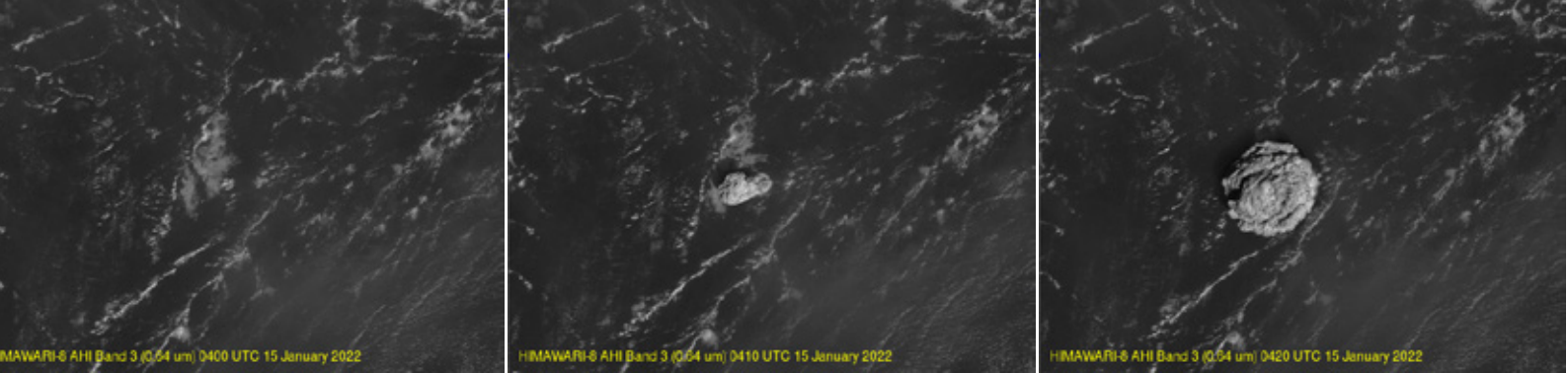
The broad consensus among the SRES writing team is that the current literature analysis suggests that the future is inherently unpredictable and so views will differ as to which of the storylines and representative scenarios could be more or less likely. Therefore, the development of a single ‘best guess’ or ‘business-as-usual’ scenario is neither desirable nor possible.

This is a correct and prudent statement. However, as a matter of history, this is not what happened over the next two decades.

After six years of research, Professor Roger Pielke Jr has uncovered a ‘hugely consequential scientific error by the IPCC.’ Its Fourth Assessment Report (2007) asked for fresh scenarios, and a workshop in The Netherlands in 2007 duly produced three, representing low (RCP 4.5), medium (RCP 6.0) and high (RCP 8.5) emissions.<sup>23</sup> What happened next is Pielke’s new discovery: ‘in the IPCC AR5 (2013–14), for whatever reason, the organisation fundamentally mischaracterised the scenario literature, which elevated RCP 8.5 and eliminated other baseline scenarios that were far less extreme.’<sup>24</sup> The result has been a modelling industry that validates only the catastrophic end of the spectrum of possibility. This has then been assumed and presented by climate zealots to be scientific underpinning of their views. Yet it is no such thing. Global warming and its relationship to climate change being a ‘wicked’ problem and the models being not reliable, it means that much of what flows from “the science,” improperly reified and thus misconstrued, will actually make things worse.

Taken together, these two epistemological errors and the installation of the RCP 8.5 as the only emissions baseline, vitiate all that follows from them, producing a bitter inversion: policies grounded on them, no doubt motivated by a good faith desire to protect nature, *have the opposite effect in practice*. This was one of the first messages that the Hartwell Group sought to convey to the high-level decision-makers who sought its advice over a decade ago, now demonstrated abundantly.

Such imperfect understanding is not from lack of diligence but from the structural, epistemological defects which are both axiomatic and consequential. They strike at the very root of the idea that mitigation policies might be effective and are to be the interventions of choice. When you don’t have good actionable information, you don’t bet the house on the output of your models being right “just in case”. To do so would be irresponsible. This makes the case for ‘no regrets’ adaptation measures – things you would want to do anyway, such as strengthening river flood defences – all the stronger.



This indeed is what was explained and proposed in a set of articles, including two in *Nature*, in 2007.<sup>25</sup> Notably, we argued for ditching the Kyoto Protocol of 1997 before its first ‘commitment period’ 2008–12 became embedded, because, as just rehearsed above, the approach it encapsulated was the wrong type of solution (‘tame’) for the special nature of the problem (‘wicked’): it was a category mistake. However, as subsequent evidence now shows, we were doomed to be right then and since, but not to be believed until, one hopes, now.

At that time, climate activists such as Al Gore were intensely hostile towards adaptation because they saw, correctly, that it was likely to dilute enthusiasm and syphon off political energy for society-bending mitigation measures. These, they hoped, would tie down the Gulliver of democratic free-market enterprise. In 2023 we are fighting the same battles, on the same old battlefield. ‘Net Zero’ is a policy predicated on assumptions long

since superannuated in serious global systems science, as distinct from eco-zealot advocacy of ever more mitigation actions with now proven uniformly unwelcome consequences. Some, such as space-based geo-engineering, are irresponsibly dangerous because irreversible.

It ought to be a relief that we now know that the Hansen Close Coupling Hypothesis was too crude and not sustained in the subsequent CO<sub>2</sub> and temperature records. Thirty five years of intensive research on global climate systems has produced one increasing certainty, which is that we know with greater confidence that we do not know with confidence how they work and, to a certain extent, the sorts of things that we know that we do not know (Known Unknowns). In Whitehead’s terms, our knowledge is alive because we are not ignorant of our ignorance. On top, there are also always Unknown Unknowns in complex adaptive system feedbacks. Such science is never settled and, if settled, not science.

## **Blinkers off: what do you know about HTHH?**

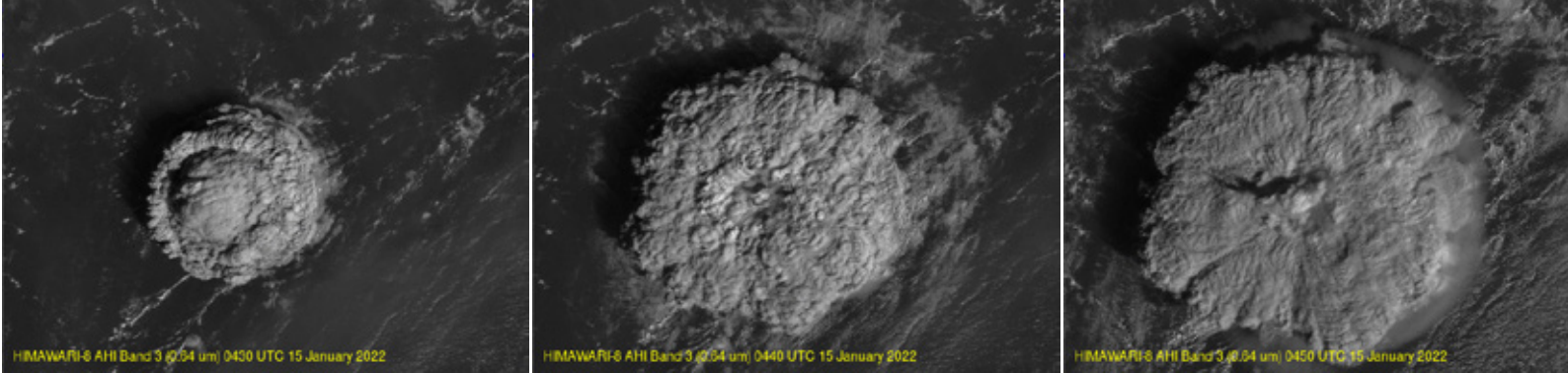
Retirement of Hansen’s hypothesis has two other useful consequences. Firstly, we cannot say with any actionable precision where the balance of negative or positive effects of the anthropogenic release of CO<sub>2</sub> lies: whether for good, prominently through the enhanced photosynthesis in trees and crops, or for ill.<sup>26</sup> That putative harm is something which is harder to show because of the taxonomic nature of global climate systems and the epistemological errors in studying them, described above. This being so, the cottage industry that claims to be able to estimate the so-called ‘social cost of carbon’ as the basis for policy decisions appears to be on shaky ground.

Secondly, it means that our opened minds are freed to consider the climate system in a broader and more inquisitive way. If we did so, might we also start to consider stressors other

than anthropogenic carbon dioxide emissions more productively? For example, an investigator looking for likely causes of the unusually warm weather of 2022–3, would surely want to examine the events of 15 January 2022? Although the mainstream media have chosen not to put the facts in front of the public, we know them with unprecedented accuracy, thanks to satellites.

On that day, the Microwave Limb Sounder (MLS) on NASA’s Aura satellite measured the climax eruption of the Hunga-Tonga-Hunga Ha’pei (HTHH) underwater volcano, an eruption which the GOES-17 satellite also filmed. A water column was blasted into the stratosphere, through the stratopause, and into the mesosphere, where droplets instantly freeze, go into orbit and fall back to Earth over later years. HTHH was the most powerful volcanic eruption on Earth since Krakatoa





in 1883, and the largest atmospheric explosion – natural or man-made, which means larger than any atmospheric nuclear bomb test – ever recorded by modern instrumentation. It projected the highest eruption column ever recorded. These are surely newsworthy front-page facts? They far exceed in significance the much smaller Eyjafjallajökull eruption in Iceland between March and June 2010, which dominated news coverage for days afterwards, simply because that ash plume so massively inconvenienced the trans-Atlantic air routes of rich and busy people.<sup>27</sup>

From the MLS data collected, NASA calculated that HTHH added 10% – that’s *ten percent* – to the total water vapour of the atmosphere.<sup>28</sup> Water vapour is, of course, a more potent greenhouse gas than carbon dioxide.<sup>29</sup> In contrast, Tambora in 1815, the biggest volcanic eruption in human history, was a land eruption, and injected ash into the atmosphere, thus producing global cooling and a ‘volcanic winter’. 1816 was famously the ‘year without a summer’ in Switzerland, with snow and

frosts from June to September, of which, from the famous and talented novel-writing competition holed up in the Alps, Mary Shelley’s *Frankenstein* was a product. Tambora also coincided with a Dalton Minimum in solar radiation.

In short, HTHH is a fascinating and truly immense perturbation of global weather systems.<sup>30</sup> Despite this, the perfunctory coverage in the main stream media, such as it was, reported mainly on its destruction of the underwater internet cable to Tonga. But the eruption was on a scale and of a nature that puts worrying about footling British car emissions into true perspective. Yet worry to the point of obsession about the wrong things at the wrong scale is what the Bland Blob of politicians, bureaucrats, hired-gun academics and hence mainstream discussion about global warming and climate change, does. Therefore we must return from the fundamental mis-framing of the basic problem to the consequences of legislatively coerced mitigation policies that actually make things worse.

## The automotive consequences of Mr Johnson

Johnson’s thoughtless virtue signal in the autumn of 2020 created mayhem for the British automotive industry. Ricardo, the world-leading British ICE research company, is diluting its prime focus by going into ‘green energy transition’, thus risking being overtaken by the Chinese in its core business.<sup>31</sup> Auto builders are now placed under ever-tightening Soviet-style strictures to force them, under rack penalties, to meet quotas of EVs to be made and sold to consumers who, unless bribed by subsidy to buy them (and frequently not even then), have no appetite for this immature, costly, and actually dangerous technology.

Electric vehicle (EV) technology is an overreach, rather as Concorde was; and both were only every luxuries for the wealthy. But whereas supersonic passenger flight was submitted to

market forces, which killed it, Professor Kelly notes that BEVs are dangerously different. Governments seem to have determined that consumers must be forced to buy them regardless and are rigging markets with bribes and with enforced destruction of better alternatives. This, he suggests, will most likely lead on the one hand to Cuba-style prolongation in service of older internal combustion engine vehicles and on the other, eventually, to public anger and resistance, as happened to Mrs Thatcher’s ill-advised Poll Tax.<sup>32</sup>

EVs will rapidly become unserviceable through lack of willing mechanics. Would you touch one, what with all the protocols for large separation spaces, two-handed working, insulated boots, suits, gloves and handy defibrillators? EVs are also increasingly uninsurable, or only at prohibitive

premiums (circa £5,000/p.a. for a £45,000 Tesla). A report for the British Government in July 2023 from Arup, consulting engineers, recommends root and branch revision of fire regulations in car parks because of the EV battery-fire risk.<sup>33</sup> Through their embedded CIM cards,<sup>34</sup> they are also at risk of Chinese auto-control and espionage. To convert the UK fully to EVs, the materials requirement for batteries alone would consume global production; worldwide electrification demands three UKs per year for 30 years.<sup>35</sup> Not too bright, ill-informed, process-bound but ideologically energised civil servants working with too free a hand cannot hope to do it better. The market is the sum of myriad collective purchasing decisions, which are always wiser than bureaucrats in the long run. Didn't the fate of the USSR and of Gosplan, the State Planning Committee with its quotas for everything, show that?

The picture is plain. Despite almost all car advertising being for EVs, dealers have large unwanted, unsold stock. EVs have very limited second-hand value or market, and demand for ICE vehicles, especially veterans over forty years old, which can 'game the system' because they are exempt from ULEZ regulations, is healthy and rising, which is already an early support to

## Intertemporal Jellybyism

However, for those latter day Gosplanners, the eco-zealots, addicted to top-down targets and timetables, there can be no retreat. The response to tepid consumer take up of EVs (or heat pumps; another immature technology forced prematurely to market) of the nakedly campaigning Climate Change Committee has been, in defiance or ignorance of Jevons' Paradox,<sup>37</sup> to call for up to *two thirds* of UK carbon reduction to be met by 'behavioural change'; in other words, by using less.<sup>38</sup> In its collective view, the stupidity or myopic selfishness (as the CCC would see it) that makes consumers reluctant to do as instructed by Plato's Guardians must be overridden in other less avoidable and more punitive ways, for example, by pricing electricity as an expensive luxury to force reduction in use.

While suiting the flagellant brigades of eco-zealots, the CCC poking its long nose into lifestyle choices has touched raw nerves among the general

Professor Kelly's case.

The way to further reduce urban air pollution from fuel combustion, (if that is actually the problem) is mature, elegant and to hand: new dual-fuel engines that can run on LPG as well as petrol, the former having zero tail-pipe particulate emissions. That requires no more from government than a relative reduction in fuel duty: the market will do the rest. However, unlike in the EU, the British LPG refuelling network seems to be being *dismantled*. Is this because of a covert civil service policy to force EVs upon us? Certainly, the Competition and Markets Authority refuses to investigate what is going on, giving the feeblest of excuses. It is a case for the Transport Minister to investigate and to resolve.

Apart from being nice to drive, apparently, there are simply no upsides to EVs. A well-engineered advanced ICE V6 or V8, over eight years old<sup>36</sup> gives a wonderful driver experience with none of the risks of EVs and with *less* lifetime environmental impact because of their superior Energy Return on Energy Invested (EROEI).

The situation is eminently recoverable if the ideologically-fuelled push for EVs stops now. But it does mean admitting grievous error.

public, who have repeatedly made clear in polls that whereas they cared for 'the environment' in a generalised way, that did not extend to any specific constraints on their lifestyles or bank balances.

This is a case of Pielke's Iron Law of Climate Politics (named for one of the co-authors of the 2010 First Hartwell Paper) coming into play.<sup>39</sup> The Iron Law states that political economy constraints always put a limit on the 'felt cost' and on the 'willingness to pay' by current citizens, and that policies that violate those constraints will not attain the legitimate authority to succeed. It is akin to Rousseau's Saw, cited earlier.

In his 2006 door-stopper review of the economics of climate change, Lord Stern falls foul of the Iron Law by using a very low (or zero) discount rate to assess mitigation measures alleged to help the unborn.<sup>40</sup> Nigel Lawson remarks that it also affronts David Hume's commonsense logic in A

*Treatise of Human Nature*.<sup>41</sup> The public just won't wear it. Already brought into question by reliance on social cost of carbon calculations which are little more than very shaky projections, Stern's cost calculations therefore go up in a puff of smoke.

Perhaps realising these difficulties, Stern fell back on a form of ethical blackmail, which brought him squarely into the late great Chancellor's cross-hairs:

The reader may recall the absurd Mrs Jellyby in Charles Dickens' *Bleak House*, the 'telescopic philanthropist' who was so concerned with good works in Africa, and with the brotherhood of humanity in general, that she neglected her own

children. The self-proclaimed ethical basis of the Stern Review's discount rate is little more than intertemporal Jellybyism.<sup>42</sup>

The Iron Law shows us that when pressured too far, voters bite back at the ballot box. This was what happened on 20 July 2023, in the by-election to choose Mr Johnson's successor in the Uxbridge and South Ruislip seat. The result proved to be a turning point, hinging on Mayor Khan's extension of the ULEZ zone, a scheme deeply resented by motorists as an infringement on the freedom and the necessary flexibility which the car alone can provide.

## **We lead, no-one else follows**

Before proceeding to the implication of the Uxbridge by-election, a broader excursion is first required, to set it in context. Almost all major economies, and most notably China, buy into *no part of this agenda*. Peking is powering ahead with firm power – primarily coal-fired – to undergird its economy, as is India, the world's most populous country. The International Energy Agency 2022 Coal Report documented that in 2021–22 global coal demand increased 3.2% and for the first time passed 8 billion tons. Coal use in electricity generation is globally at an all-time high. There are good reasons for this.<sup>43</sup> And before Biden, even the USA was managing simultaneously to grow and to decarbonise (if that matters on a precautionary principle of low priority, relative to other more established threats) thanks, not to renewables, but to flows of shale gas displacing coal. Overall then, the picture is not of transitions back from dense stocks to thin flows of primary energy.

The reasons are clear. There is a strong correlation between the adoption of 'renewables' and the price of electricity.<sup>44</sup> Moreover, the price of electricity also correlates with the extent of deindustrialisation, an area in which the UK is indeed a world leader. GDP from making things in the former workshop of the world has halved in twenty five years, with industry sailing off to China's coal-fired electricity grid, from whence goods are reimported (along with worrisome embedded surveillance chips in many products). '11/11', when the PRC was admitted to the World

Trade Organisation, was in its own way as momentous as '9/11' two months before, and belief in a 'golden age of co-operation' by Messrs Cameron and Osborne after 2010 was as badly misjudged. It was a lazy conceit to believe that as a result the PRC would become like us. Rather, it was like inviting the burglars into our home.

However, there is more. These variables are not unrelated. As was detailed in *The Worm in the Rose*, the CCP is choosing consciously to deploy the economic strength conferred by its use of firm power to weaponise the western world's current obsessions with Net Zero. On the one hand, it does this by bankrupting or taking over western manufacturers of wind, solar and EV technologies, thus making us dependent on them for these goods. On the other, it supports ecozealots through the covert activities of the United Front Work Dept, a vast secret agency, described by Xi Jinping as 'China's magic weapon', which targets the impressionable, the powerful and the greedy. By 2025 it is predicted that the CCP could control a third of global lithium mining and will have an almost unassailable grip on the global lithium and cobalt supply chains.<sup>45</sup> Africa is the focus of this modern Great Game although Afghanistan, the original site, also has large deposits which Biden's calamitous withdrawal in summer 2021 ceded to our enemies.<sup>46</sup> This therefore adds a national security dimension to the other many faceted objections to 'Net Zero' to which we return, below.

## The potential consequences of Mr Sunak's pragmatism

Thus sobered, we can return to Mr Sunak's announcement that he will (slightly) relax the Johnson ICE ban, slipping it back to 2035, in line with the EU. The rage, out of all proportion, that greeted this announcement showed how important the decision was, for it shifts the Overton Window, opening the way to the debates that did not happen at the time of the adoption of the target, about the opportunity costs involved.

Proper reacquaintance with the 'adaptation versus mitigation' debate of 2007–2010 should follow, and this in turn will eventually make possible at last a sober and empirical assessment of where exactly the whole issue of global warming stands in relation to other human needs: for health, wealth and happiness. However, do not underestimate that task, given the indoctrination that has taken place.

In a word, Mr Sunak's ICE announcement is important. His bat-squeak adjustment to Johnson's irresponsible target is a signal of grown-up politics returning to Net Zero after the recent madness of crowds.

Rescuing environmental stewardship from devaluation at the hands of eco-zealotry is a direct parallel to Lord Sumption's call to rescue human rights from the ECHR. Now is the moment to push further.

In his 2012 book on *Green Philosophy*, the late Sir Roger Scruton sought to 'redomesticate' environmental concern, restoring it as an aspect of *oikophilia* – love of home – and removing the issue from the clutches of the regulatory state and its targets and timetables. It has been stressed here how reliably *nomenklatura* anywhere obstruct efficient invention and innovation and deform those fundamental activities by prior constraints, usually communicated through control of research funding. Sir Roger added the converging line that, by confiscating risk, human resilience is diminished and with it the necessary sense of individual moral responsibility that propels generosity of spirit towards others, which in turn is the prerequisite for any efficient stewardship of the natural world.<sup>47</sup> It is the vital missing link.

From this perspective, it is the *critique* of Net

Zero proceeding from a correct theory of knowledge – and not 'Net Zero' – and also growing public protest *against* eco-zealotry – and not that eco-zealotry – which are the true friends of the earth as well as of freedom-loving people who inhabit it. This is because caring for the latter is the only reliable way to care for the former.

The Hartwell Group took on the mission of explaining why and how that was so. Its last word on the subject was a paper entitled *The Vital Spark*, arguing for productive ambition, and making the case that only a high-energy world is morally defensible and politically viable.<sup>48</sup> The reasoning is so apt for the present moment of opportunity that the Prime Minister has created, it deserves full quotation.

Talk of ambition has been at the centre of climate policy debates of recent years, where it has become the measuring stick by which each country's commitment to climate change action – and, by implication, its moral virtue – is assessed. But we would argue that this dominant use of 'ambition' has been anything but ambitious. It has been a case of wishful thinking... it has appealed to a triumph of the will that confuses hope with fact, declaratory statements with action, and acts of legislation with real-world results.

We believe that such rhetoric has not been helpful. It also reveals a radical misunderstanding of what productive ambition can be.

Productive ambition implies, as the Latin root suggests (from *ambire*, to walk about, to visit and seek the political support of), the careful investigation of possibilities and, crucially, the acquisition of public consent in order to produce meaningful, tangible results. Bearing this in mind, a relentless pragmatism may be the most ambitious approach, precisely because it is indirect and governed by the need for public agreement. These are key Hartwellian principles.

## The second fulcrum

The sheer scale of challenge that any change to Net Zero involves has deliberately been laid out by explaining both the epistemological defects that frame it and the practical defects that it manifests, principally through the example of EVs. Net Zero has spread everywhere, at every scale, like an invasive weed. For recent examples, it is now reflexively, brainlessly, invoked to justify causes as varied as the ban of a useful anaesthetic in a hospital, or to justify the cause of the Ramblers' Association seeking to maximise access across private land or, by the National Trust, to overlay its statutory charitable duties with political campaigning. So it cannot now be uprooted piece by piece. Something systemic is required.

This returns us to the example of Lord Sumption's case for denunciation of the ECHR to protect the dignity and honour of human rights. Net Zero needs to find its fulcrum too. Both may draw comfort from a recent success in doing just what is advocated here.

In December 2020 at the height of the cabin-fever of the Chinese pandemic, an attempt was made by a hapless Vice Chancellor to bind the University of Cambridge to the 'respect' agenda. This agenda is, of course, dangerously subversive, because who judges 'respect' is subjective, and in the eye of the offended party and his or her 'lived experience'. It is a recipe for perpetual grievance and victimhood cultures.

The Cambridge case was a small-scale exercise of power by what Sir Roger Scruton called a 'regulatory state', where all the momentum of bureaucracy lay with the university administration. Fortunately, in the Regent House, the University still possesses a democratic forum for resident MAs to sanction or approve the Old Schools; and so Vice Chancellor Toope was obliged to lay a motion. Professor Arif Ahmed, a philosophy professor of Gonville & Caius college, moved a single word amendment. 'Respect' was to be replaced in Toope's motion by 'tolerance'. It was an Archimedes' Fulcrum because, when the force of an 86.9% majority was applied, the grievance and victim culture was doubly disempowered. 'Tolerance' removes grounds for woke lawfare, and at the same time removes any ground for the taking of offence (not that this has

deterred the Cambridge wokerati).

To do the least to obtain the most is an oblique approach, in line with best practice in diplomatic and military strategy. It would certainly have gained admiration from Pitt the Elder, who won the Seven Years War and thus defined the foundations of the modern world using just such a 'system', as he called it.<sup>49</sup>

The 'Net Zero' problem has precisely the same characteristics as the Cambridge academic community's success against its former vice-chancellor, but at national scale. While the defects in the project cannot be rectified, the toxic quasi-religious politics involved make frontal blockade in detail impossible. But that is not necessary anyway. For Net Zero, the Archimedes' Fulcrum is, like Professor Ahmed's, a single word.

All the Government needs to do to is replace in the 'Net Zero' legislation, by amendment, the words 'legal target' with the word 'aspiration'. At a stroke, this small change cuts the ground from under the eco-lawfare activists. Then, through the parallel measure of the denunciation of the ECHR, they are also deprived of recourse to the Strasbourg Court as an instrument for the pursuit of case-by-case guerrilla lawfare. That is why these two perverse problems are presented in double harness here.

This single-word change will transform the political atmosphere for the better. We already know how loudly the eco-zealots will object. Former CCC chairman Lord Deben was especially offended by Mr Sunak's small retreat on Net Zero, which is usually a good omen for the health of the environment. But Mr Sunak also knows already that he will reap considerable political reward, because the silent people of the United Kingdom, given the chance, will breathe a collective sigh of relief and vote accordingly. Pielke's Iron Law is iron for a good reason. Deletion of a legal target will also permit creative destruction of the regulatory hydra that was a side-effect of Mrs May's arid search for a 'legacy'. Naturally, other dismantlings can and should follow. Cancelling the device of 'carbon budgets' and of regulators to prescribe and police them can occur, because they are not required by a mere aspiration. Aspirations are achieved

obliquely and spontaneously by different roads.

The amendment to 'aspiration' will allow building as well as demolition. A quick scan of the sectors shows the following possibilities coming into scope, which will increase national wealth as

well as – in consequence – better protecting the natural environment by releasing natural creativity from regulatory straitjackets. It will do this from first principles and from avoidance of Net Zero's six fallacies.

## An energy transition as if the environment really mattered

Figure 1 shows that the proportion of so-called 'renewables' in world total primary energy supply has barely moved over 50 years, rising from 12.8% to 14.6%. Fossil fuels continue to drive the global economy, with the proportions of gas and coal increasing most. Nuclear has risen from a negligible to a small contribution. But renewables are stuck; and that is for good reason. The whole premise of a 'green' energy transition is thermodynamically wrong, as has been explained here and in 2021.<sup>50</sup>

The central reason why such a mistaken

conception has gained sway is perverse ignorance, both of physics and of the history of mankind's relationship with energy.

The transition from thin flows to dense stocks cannot be reversed: only new inferior sources are added and none of the firm power can be taken away; and Jevons' Paradox cannot be ignored or wilfully inverted. As E.F. Schumacher once observed, pithily, and reflecting his own life experience, 'an ounce of practice is worth a ton of theory.'

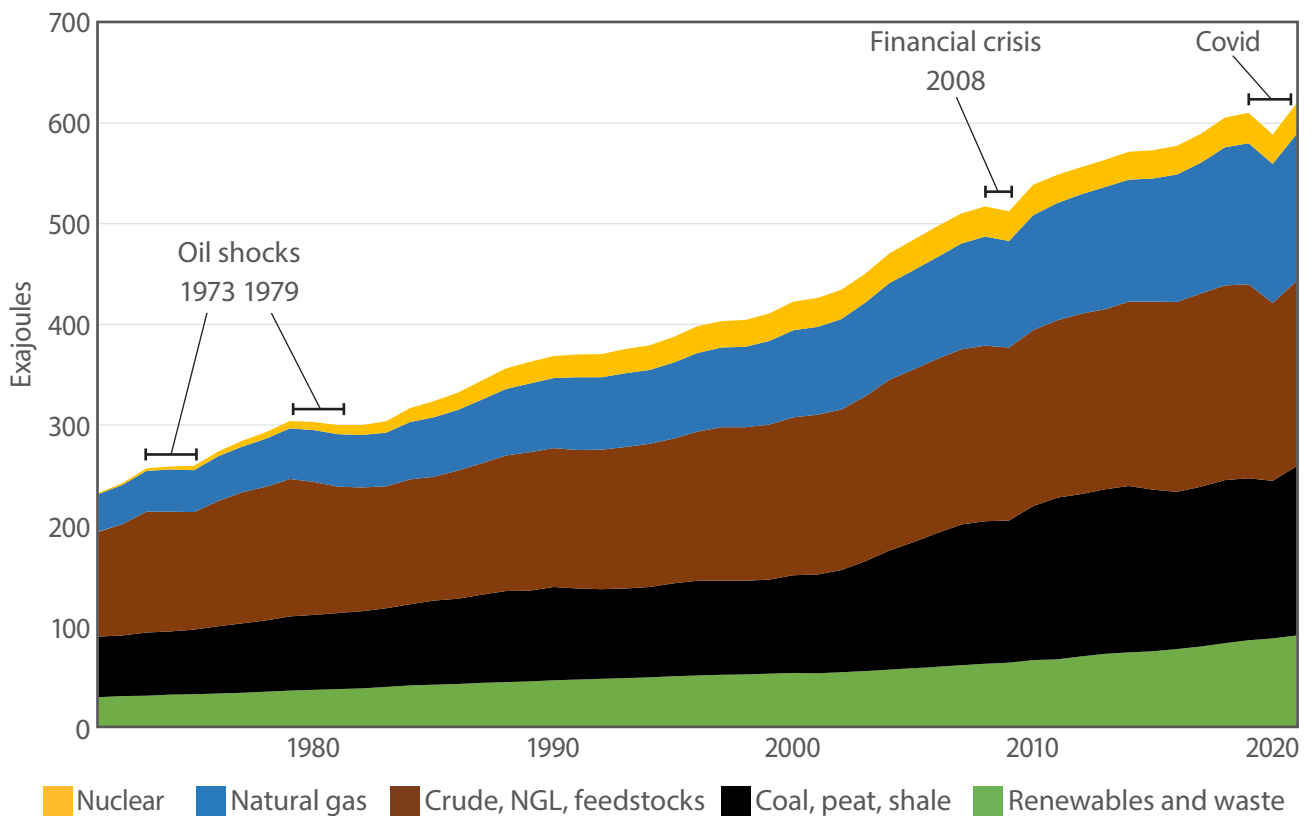


Figure 1: World total primary energy supply, 1971–2021

Source: Redrawn from Dr John Constable.<sup>63</sup>

## On the brink of a general world war

Since 2001 we have been in a 'grey war' with Communist China, characterised by information and psychological tactics. They have known this, our Intelligence services have known this but our political and business classes have preferred to believe in a 'golden age' of cooperation. Thus, self-deluded, we have lived through the first stages of a more general world war. Since 2022, the skirmishes have gradually increased in intensity, until now, with the Hamas pogrom of 7 October 2023 and the events since, we have crossed the threshold into the second stage, with episodes of 'hot' war added to the mix, alongside cold-war tactics such as economic pressure and general deterrence.

In quick summary, in August 2021, Biden's calamitous withdrawal from Afghanistan<sup>51</sup> begat Putin's invasion of Ukraine, the failure of which begat the Wagner Group's creation of chaos, first in Sudan (where they supported *both* sides), then in Niger (which holds France's principal uranium supplies). It also begat the extinguishing of Armenian control

of Artsakh (Nagorno Karabakh) and now, with Iran the king-pin and its Revolutionary Guards the agent, the long-planned Hamas atrocities have come at just the right moment to relieve pressure on Putin by distracting the West from its support for Ukraine. Whether intended or not, it has certainly worked. The geo-strategic blindness of the west's principal leaders compared to their eighteenth century predecessors is startling.

Were Great Britain a warship, which as Europe's premier naval power, in a sense we are, now is the time to pipe 'action stations' and to clear the decks of unnecessary obstructions. Luxury beliefs such as 'Net Zero' must go overboard. A thermodynamically literate energy policy underpinning to the economy is as much a national security priority as is acting as if the environment were more than just an opportunity for virtue signalling. Everything aligns for Mr Sunak's government at this moment. In Number Ten they might well ask, 'If not now, when. If not us, who?'

## National security criteria: electricity and steel

Electricity production reform is fundamental. Freeing the market from strangulation by regulation will open the way for the spontaneous adoption of the 'gas bridge to nuclear' transition advocated by the Hartwell Group. Unlike the mis-described 'renewables' transition, this would be a genuine, thermodynamically competent transition because, like all others during the last five hundred years, it would move towards denser stocks of energy, and thus obey the Second Law of Thermodynamics.

Much hope would be placed on series deployments of small modular reactors, including high-temperature SMRs, which are needed to deliver process heat in manufacturing industries.

Oil and gas licenses, including for fracked gas from the Bowland Basin, can still be granted, as has just been done for the Rosebank offshore field, but with the fulcra in place, there would be no opportunity for obstructive eco-lawfare. The courts would be pulled out of the front line of endless attempts to involve them in policing politics, which is not their job, to the better health of both the courts and Parliament.

As a result of the shift to renewables, British grid stability is currently dangling precariously,

primarily supported by the single thread of gas-fired power stations, most of the fuel for which is imported, either through undersea pipelines, which are now at risk of disruption by Russia, or on LNG tankers from Qatar and the USA, which may soon require naval escort.

After 7 October, the price of gas is rising fast. Gas turbines (CCGTs), as earlier mentioned, are premium assets which, as well as having the muscle for peaking power also and illogically, as Ernst Schumacher explained (see below), carry the weight of a lot of baseload. It is illogical to employ flexible peaking power assets burning premium clean fuels for baseload. But as more non-dispatchable so-called 'renewables' are unthinkingly loaded onto the grid, no firm power can be retired. CCGT stations have to be on constant standby to step in when the wind doesn't blow, or blows in the wrong place, or blows too hard. Solar farms don't work at night, and subsidies drive the sterilisation of farmland which, if farmed, produces energy more reliably in the form of foods.

CCGT stations, misused, are therefore indispensable to keeping the lights on; but the spaghetti of regulation designed to give forced priority

to non-dispatchable so-called 'renewables' for solely politico-religious reasons has destroyed the business case for building new capacity. The days of the Central Electricity Generating Board's 'merit order', which brought different types of generators onto the grid as a function of flexibility and unit cost, and sometimes of national fuel security policy, are long gone.<sup>52</sup> New nuclear will be some time coming, and in any case nuclear, especially in large stations, is best run as baseload. The logical and most responsible mature technology addition, immediately available, is therefore to bring back British coal as baseload. However, it will not be coal combustion as we have previously known it. It will be clean coal. Time to stop dishonestly preaching water on this side of the English Channel too.

One of the authentic heroes of pragmatic environmentalism was E.F. Schumacher. Half a century ago, he was the author of *Small is Beautiful: a Study of Economics as if People Really Mattered*, which helped launch the enduring parts of the 1970s' cycle of modern environmentalism. From

1950–1970 he was Chief Economic Adviser to the National Coal Board, in which capacity, on national security grounds, he made the case for baseload coal (of which we still have ample reserves). In the 1960s and 70s, his views were drowned out in the floods of cheap Middle Eastern oil, but his argument is once again resonant today. He warned against the danger of excessive reliance on imported oil and gas in the era before the North Sea began to produce in volume in 1975. Partly for self-harming 'Net Zero' reasons, we are once again vulnerable today. At the opening of the nuclear age, which started on 17 October 1956 at Calder Hall Magnox station in Cumbria, he had concerns about being too reliant on nuclear.<sup>53</sup> The CEGB pioneered advanced fluidised bed coal combustion and, once again, the opportunity can be open for an advanced coal combustion technology lead.

Therefore, for sound reasons of national security and of responsible environmental stewardship, thermal coal deep mining in Wales and Nottingham can and should resume. Most





immediately, the largest thermal power complex in England, Drax, can and should end the ecologically illogical – not to say environmentally heinous – burning of American clearcut chipped whole trees. In a freed-up market without subsidies, which the move from targets to aspirations will make possible, the financial case for high-volume wood burning also swiftly turns to ash. Drax will no doubt wish, like EnBW in Germany, to upgrade to ultra-supercritical<sup>54</sup> coal combustion steam plants with particulate scrubbers, which might deliver thermal efficiency of as much as 50%; between 10 and 25% better than older coal combustion plants. Once the electricity generating industry is liberated from the current straitjacket of regulation intended to favour non-dispatchable generators that has wrought such havoc in investment decisions, other advanced coal operators will no doubt return to the British market, as is happening in Germany since the *Energiewende* started to fall apart. The GE RDK8 steam power plant at the Rheinhafen-Dampfkraftwerk electrical generation facility in Karlsruhe has achieved a 47.5% net thermal efficiency, while producing 919 MW of electricity. Today, RDK8 is the world's most efficient coal-fired steam power plant.

A perverse advantage of wind and solar generators in electricity supply, technologies which have such feeble EROEI that they are more accurately described as consumers than producers of useful energy, is that their front-end technologies degrade in performance quickly and have a short natural lifespans (like EVs), and so they will be gone by 2050 or sooner, once the subsidies and regulatory forcing, which keep the bubble inflated, ends.

We have just seen this occur with the failure of the most recent auction for offshore licences, which failed to attract a single merchant wind operator bid, once the rent-seeking opportunities were diminished. As windfarms cease to operate, they will no longer obscure air-defence radars, slaughter birds and disorient and kill sea-life. The RSPB and Greenpeace can stop contorting their charitable purposes and looking the other way, and can return to their original noble causes.

But that will not happen soon because, as Net Zero Watch has long predicted, the government

has been spooked by the rent-seekers, and, presumably afraid of a loss of face as the 'cheap wind power' claims fall apart, on 16 November 2023, it capitulated to their demands for greatly increased subsidies:

The energy minister announced an astonishing round of price increases, with offshore wind offered 66%, floating offshore wind 52%, geothermal 32%, solar 32%, and tidal 29%. The prices for some of these technologies are now up to six times higher than long-term market averages. Since Contracts for Difference are index linked, claims that these increases address recent inflationary effects are simply implausible. Worse still, the 66% increase is a minimum: government is offering windfarm operators 'more money' 'if they reduce carbon emissions in their supply chains and demonstrate positive social impact on communities'. How much money is not specified, leaving the cost to consumers and taxpayers open-ended.<sup>55</sup>

The only safe prediction about such extreme interventionism is that the higher it climbs, the harder it will fall.

Back in that hard, real world, a number of presently ignored national security priorities also need to be acknowledged. No modern economy, especially one in a 'grey war' as we now are, can prosper safely if its vital industrial processes are hostage to malign states. We need volume virgin steel production in these islands, of the quality achieved by continuously upgraded Japanese steel plants, not just electric arc furnace scrap recycling. Steel-making should be as independent as it can be, because we need simultaneously to bring back home, especially from the PRC, jobs and processes that were shipped offshore after 2000. The intention, recently announced, and with a taxpayer-funded bung attached, to end blast furnace steel production simply to meet a notional 'carbon budget' target, can and must be reversed, and British metallurgical coking coal mined once more.

In both electricity generation and steel-making the government has made decisions diametrically opposite to what national security and responsible environmental stewardship demand.

## From automobiles and planes to chainsaws: bonfire of the regulations

Moving on with what could and should be done, in the transport sector, the ULEZ regulations and all their works could be swiftly removed, so that the civil harmony that they disrupted can be restored. The cameras and other obstructive paraphernalia of 'fifteen minute cities' can shuffle off. As earlier described, improving the fuel tax advantage for LPG will lead immediately to resumed spontaneous adoption, further reducing already historically low levels of urban traffic tail-pipe pollution. Once the 'Net Zero' targets and timetables are abandoned, if it isn't too late to reverse gear, engineering refinement of already low-polluting ICEs can be resumed, and will continue to deliver spontaneous improvements in fuel efficiency and urban air quality as an unforced by-product.

Meanwhile, because EVs are heavier than ICEVs, their emissions of ultra-fine particles (less than 25 nm – the size most damaging to human health) are much worse, especially when running on conventional tyres, which many will, because specialised EV tyres are much more expensive. The effect is therefore worse than tail-pipe particles, which is yet another reason to get these things off the roads.<sup>56</sup> The EV debacle can swiftly end – ideally with a fulsome apology and, probably, compensation to the industry so that it can roll back its reluctant switch to EVs and get back to building what consumers actually want – ever-improving LPG (once they are given the chance), petrol and diesel vehicles.

The threat of fires from lithium battery factories, stores and 'farms' (documented in *The Worm in the Rose*), and resulting air and water pollution, will be lifted. Yet the threats to life are not only indirect. The energy storage-to-weight disadvantages of Li-ion batteries, now and on any foreseeable upgrade, compared to liquid fuels, become, in handheld applications, more than a health risk at one remove.

The threat is direct.<sup>57</sup> For example, professional-use high-performance lightweight petrol chainsaws deliver high horsepower to the blade, which is the key to safety in operation. Users face not only reduced work efficiency from the heavier weight of comparable battery-powered saws, but also, in consequence, personal danger. Comments

on the experience of using battery prototypes, heard from professional tree surgeons, are not repeatable.

In the air, an end to policy-forced experimentation with biofuel substitutes for JET-A and A1 aviation fuels would be wise. These misnamed 'sustainable' aviation fuels (SAFs) have poorer EROEI, because of high production process energy requirements, poorer energy density, poor power density of feedstock if soybean or palm oil or similar are used.<sup>58</sup> If it ain't broke, don't fix it.<sup>59</sup> SAF was only ever a virtue signal, and even if it can be made safe from icing, which seems possible, ramping up syn-fuel production of HEFA<sup>60</sup> to any major level risks damage to already fragile biodiverse environments, which is the opposite of what eco-zealots believe happens. Nor does it reduce CO<sub>2</sub> emissions at point of combustion, or at least hardly at all.

The public emphatically want to fly: simply look at the FlightRadar24 app and at expanding airline fleets to see that. The good news is that airlines can carry on flying people with clear consciences in continually improving aircraft powered by the aerojet and JET-A and A1. The aerojet has demonstrated the most consistent year-on-year spontaneous improvements in efficiency, reliability and safety of any major mechanical technology since the 1950s. The internet, upon which eco-zealots live obsessively, and on which they depend for co-ordination of their protests, now consumes more energy and generates more emissions than airline travel, which constitutes 2% of global total. Do they actually know this?

There can also be a bonfire of regulatory agencies and quangos, which will save much taxpayer money. The 'regulatory state' can be radically pruned. Many central government, devolved and local government posts can be abolished, because their functions will no longer be required. These are just early benefits, and – it cannot be overstated – the withering of 'Net Zero' and its targets, subsidies, timetables and attendant enforcers will be a *net gain* for pragmatic environmental stewardship, which depends upon both thermodynamic literacy and the cultural legitimacy which underpins political legitimacy.

It will also save the country from thirty years of command-economy coerced austerity. Professor Kelly has calculated that the extra costs are in excess of £3 trillion, which in real-terms equivalence is more than the USA spent on the Second World War:<sup>61</sup> Nor do we have the workforce:

...we only have 40 thousand electrical engineers in the country today, so we need another 20 thousand and another 20 thousand civil engineers.

## Beyond the threshold

Three other actions are beyond the present remit, but plain to see on the horizon. Once the ECHR has been denounced and replaced, two laws which book-ended the Blair/Brown era – the Human Rights Act 1998 and the Equalities Act 2010 (which carries dangers akin to the ‘respect’ agenda) – can be repealed. Those repeals will put a further dampener on eco-activist lawfare that might impede exit from ‘Net Zero’; they are, in any case, necessary constitutional reforms. Doing so will add to the dilemmas facing any incoming administration, in the way that denunciation of the ECHR will do, as mentioned at the outset.

Then the most difficult task of all can begin, which is to re-educate two generations who have been ill-served in their education by the replacement of being taught *how* to think with *what* to think: it is the very thing which, this essay suggests, lies at the roots of the present problems about climate catastrophism. Children cosseted and intellectually groomed – for it is nothing less – through ‘safetyism’ acquire ‘coddled minds’ and damaged emotional stability.<sup>62</sup> But there is hope here too. For

## Conclusion

But all this is to peer into much wider vistas than originally intended for this essay. Its purpose was simple: to identify and to describe how to use two connected fulcra, delivery of which, while it has a strong enough majority to do anything and in what time remains to it, the present government would be wise to make its overriding political purpose. It has been argued that there are strong national security reasons to do this, and those reasons are in harmony with a return to pragmatic environmental stewardship.

And they take about ten years to train...

He concludes that:

...the people who are advocating for Net Zero should be telling us all of these changes that are implicit in the assumptions they make...

Otherwise, these dreams are as fantastical as Baron von Munchausen's flight to the moon.

example, the success of Katherine Birbalsingh, the Headmistress of the Michaela Community School in Wembley, known for its strict behaviour policies and traditional teaching methods, is a beacon and an inspiration. The academic success of its pupils, many of whom come from families rich in love but poor in money, is a credit to them and to her and her staff, and a vindication of the enduring powers of traditional teaching and of the values of patriotism embedded in the Burkean compact, and of the unrivalled creativity that western civilisation nurtures.

Children deserve to be taught from first principles, not fed pre-cooked opinions, still less told and actively encouraged to be led by their feelings (‘lived experiences’), which as social psychologist Jonathan Haidt and many others argue, is actually cruel and emotionally destabilising. A teaching profession willing and able to do this is required, and in the state sector, parts of the independent sector, and even, heaven help us, in some universities, it is plain that we no longer have one.

This will strengthen Sir Roger's *oikophilia*, and that brings material cultural benefit. Turning right-side up and putting the ‘regulatory state’, shorn of most of its powers, back into its box will thereby restore trust and regain legitimacy and enthusiasm for politics by reconnecting with the priorities of the silent people who were the revolutionaries of 2016 and 2019.

These are hard times and they demand hard thinking, which is both a duty and a pleasure.

## Notes

1. R. Lehman, 'An Introduction to the Overton Window of Political Possibility' <https://www.mackinac.org/12481>.
2. J.W. Simons, *Israelophobia: The Newest Version of the Oldest Hatred and What to Do About It*, Little Brown, 2023.
3. N. Cohn *The Pursuit of the Millennium: Revolutionary Millenarians and Mystical Anarchists of the Middle Ages*. First published 1957, Revised Edition 1992, Oxford University Press.
4. Interview with Sir Richard Dearlove, TALK TV, 14 October 2023 1409-1423 hrs. <https://www.youtube.com/watch?v=jYokhu-x4jE>.
5. J. Sumption, 'Judgment call: the case for leaving the ECHR' *The Spectator*, 30 September 2023 <https://www.spectator.co.uk/article/judgment-day-the-case-for-leaving-the-echr/>.
6. The USA does not have the Strasbourg Court problem, of course; but the American jurisdiction has an interesting developed precedent for pursuing through American courts human rights breaches wherever they may occur as civil actions. It is known as the 'Filartiga Principle' after a case (*Filartiga v Peña-Irala*) found on Appeal to be justiciable under the Alien Tort Claims Act (1789) now codified in 28 U.S.C. §1350. The 1789 Act was conceived with pirates in mind, declaring them to be *hostis humani generis* (enemies of all mankind). *qv* J.M.Blum and R.G. Steinhardt, 'Federal jurisdiction over international human rights claims: the Alien Tort Claims Act after *Filartiga v Peña-Irala*' *Harvard International Law Journal*, Winter 1981,22,1, pp.53–113. In 1981 there was widespread enthusiasm for supersession of national by international law; but presciently from the perspective of 2023, Blum and Steinhardt observed that, '...because the emerging world order continues to be built upon a reality of state sovereignty...' nothing will endure without taking this into account. Federal jurisdiction of international human rights cases has direct relevance to the second part of Sumption's first point, too.
7. G. Prins, 'Beyond the ghosts: does EU membership nourish or consume Britain's interests and global influence?' in (eds) P. Minford and J.R. Shackleton, *Breaking Up is Hard to Do*, IEA, 2016, pp.58–81; *idem*, 'EU at clear risk of collapse, warns major new report' *Briefings for Britain*, 02/04/2018 [full report link therein] <https://www.briefingsforbritain.co.uk/eu-at-clear-risk-of-collapse-warns-major-new-report-by-gwythian-prins/>.
8. J. Tainter, *The Collapse of Complex Societies*, (New Studies in Archeology Series) Cambridge University Press, 1988.
9. R. Tombs, "The developing world should be grateful for Britain's historical role", *The Daily Telegraph*, 21 November 2023, <https://www.telegraph.co.uk/news/2023/11/21/the-third-world-should-be-grateful-for-britain/> ; N. Biggar, *Colonialism: A Moral Reckoning*, William Collins, 2023, *passim*.
10. This is done under the procedures set down in Article 58(1) in the ECHR: on six months' notice, but possibly, due to the 'Miller One' Supreme Court judgement that clipped the Prerogative powers of the Executive, preceded by a strongly whipped one line Bill of authorisation to invoke the 'denunciation' procedure in the Treaty. That is for law officers to say. Since the Supreme Court ruling against the Rwanda Policy, authoritative legal voices say that denunciation is now essential to close off the option of case-by-case 'lawfare'.
11. N. Lawson, *An Appeal to Reason: A Cool Look at Global Warming*, Duckworth, 2009 (2nd edition) p.114.
12. G. Prins, *The Worm in the Rose*, NZW, 2021. <https://www.netzerowatch.com/content/uploads/2021/10/Prins-Net-Zero-National-Security-2.pdf>.
13. 'This is the essence of the second law of thermodynamics: in any closed system (i.e. one without any external supply of energy), availability of useful energy can only decline. Energy remains conserved (the first law of thermodynamics) but its practical utility is diminished because

*disordered, dissipated low temperature heat (the final product of all energy conversions) can be never reconstituted as the original highly organised fuel* [emphasis added] or electricity. This is an irreversible process, as no action can reconstitute a tank full of gasoline or a truckload of coal from the diffuse heat of the atmosphere' V. Smil, *Energy Transitions. History Requirements. Prospects*, Praeger, 2010, pp. 7–8. 'Green' transition tries to do just this: extract high quality power from high entropy thin flows, which cannot be done. 'Green' transition is therefore remarkably akin both in objectives and in rent-seeking, to the ancient and money-grubbing researcher who was the first that Gulliver met at the Academy of Lagado, who had been eight years attempting to distil sunbeams from cucumbers: 'He told me, he did not doubt, that, in eight years more, he should be able to supply the governor's gardens with sunshine, at a reasonable rate: but he complained that his stock was low, and entreated me 'to give him something as an encouragement to ingenuity, especially since this had been a very dear season for cucumbers.' I made him a small present, for my lord had furnished me with money on purpose, because he knew their practice of begging from all who go to see them.' (J.Swift, *Gulliver's Travels*, (1726) Part III, Book V).

14. The next verse is as mordantly relevant for contemporary eco-zealotry: 'A new song, a better song, My friends will be my aim!//We should, right now on earth, A kingdom of heaven proclaim.'

15. V. Smil, *Energy and Civilization – A History*, MIT Press, 2017.

16. Dept of Transport, 'Transport Statistics 2020'. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/945829/tsgb-2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945829/tsgb-2020.pdf). In the abnormal lock-down year, 88% of private travel was by road.

17. V. Smil, *Prime Movers of Globalization: The History and Impact of Diesel Engines and Gas Turbines*, MIT Press, Cambridge MA, 2010 p.217; *idem*, *Energy Transitions, History. Requirement. Prospects*, Praeger, 2010, p.9 Fig 1.2.

18. Dr J. Hansen, Testimony and Prepared Statement, pp. 39–46, *Hearing before the Committee on Energy and Natural Resources, United States Senate, One Hundredth Congress Pt 2*, (facsimile at <https://babel.hathitrust.org/cgi/pt?id=uc1.b5127807&view=1up&seq=1>).

19. Cybernetic, 'good at steering' from the Greek for steering (κυβέρνησις) describes the action of automatically self-correcting systems, driven by feedbacks.

20. These characteristics summarised from H.Rittel and M.Webber, 'Dilemmas in a General Theory of Planning', 4 (2) *Policy Sciences*, 1973, pp. 155–169. [https://urbanpolicy.net/wp-content/uploads/2015/06/Rittel-Webber\\_1973\\_DilemmasInAGeneralTheoryOfPlanning.pdf](https://urbanpolicy.net/wp-content/uploads/2015/06/Rittel-Webber_1973_DilemmasInAGeneralTheoryOfPlanning.pdf).

21. A.N. Whitehead, *Science and the Modern World*, (Lowell Institute Lectures 1925), Cambridge University Press 1926. Reprinted The Free Press, New York, 1967.

22. P. Thiel, 'The Diversity Myth', Scruton Memorial Lecture, Oxford, 25th October 2023. <https://www.scruton.org/events-2023/2023/10/16/2023-oxford-memorial-lectures> ; M. Midgley, *Science as Salvation: A Modern Myth and its Meaning*, Routledge, 1992.

23. The numbers refer to hypothesised watts per square metre heating.

24. R. Pielke Jr and J Richie, 'Distorting the view of our climate future: The misuse and abuse of climate pathways and scenarios' *Energy Research and Social Science*, Vol 72, Feb 2021, <https://doi.org/10.1016/j.erss.2020.101890> ; R.Pielke Jr, 'How climate change became apocalyptic: digging deeper into the IPCC's most consequential error.' *The Honest Broker Substack*, 16th October 2023.

25. G. Prins and S. Rayner, 'Time to ditch Kyoto'. *Nature* 449, 973–975 (2007). <https://doi.org/10.1038/449973a>. R. Pielke, G. Prins, S. Rayner and D. Sarewitz, 'Lifting the taboo on adaptation'. *Nature* 445, 597–598 (2007). <https://doi.org/10.1038/445597a>. Both these and almost all the precursor and main Hartwell Group papers (except 'The Wrong Trousers' (2008) and *The Vital Spark: Innovating Clean and Affordable Energy for All* (LSE, 2013), which are long-form essays, published independently) are collected in (eds) S. Rayner and M. Caine, *The Hartwell Approach to Climate Policy*, Science in Society Series, Routledge (2015).

26. S. Arrhenius, 'On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground', *The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*, Series 5, Vol 41, April 1896, pp.237–276.
27. The National Centre for Atmospheric Science (Natural Environment Research Council), 'Eyjafjallajökull 2010: How Icelandic volcano eruption closed European skies,' 2010, <https://ncas.ac.uk/eyjafjallajokull-2010-how-an-icelandic-volcano-eruption-closed-european-skies/>.
28. L. Millán, et al., 'The Hunga Tonga-Hunga Ha'apai hydration of the stratosphere,' 1 July 2022, *Geophysical Research Letters*, <https://doi.org/10.1029/2022GL099381>. The amazing GOES-17 (NASA/NOAA Geostationary Operational Environmental Satellite) overhead film loop of the moment of eruption is included in the JPL news report, which is a plain English summary of the Millán *et al* paper, <https://www.jpl.nasa.gov/news/tonga-eruption-blasted-unprecedented-amount-of-water-into-stratosphere>.
29. <https://gml.noaa.gov/ccgg/trends/>. The best quality recent data track of CO<sub>2</sub> from the Mauna Loa observatory shows around 80 ppm increase from 1959–2023 (December 2022–July 2023 observations were made at a nearby site because of the eruption of the Mauna Loa volcano). That is not in question. What is in question is what that *means* within the complex pattern of GCS cybernetic feedbacks. See also, usefully, W.A. van Wijngaarten and W. Happer, 'Atmosphere and Greenhouse Gas Primer', 3 March 2023, [arxiv.org/pdf/20303.00808.pdf](https://arxiv.org/pdf/20303.00808.pdf).
30. It also coincided with a large El Niño <https://blog.metoffice.gov.uk/2023/04/25/el-nino-on-the-way/>.
31. <https://www.ricardo.com/en/who-we-are>.
32. M. Kelly, 'Battery electric vehicles are like Concorde', *The Daily Telegraph*, 17 November 2023, <https://www.telegraph.co.uk/news/2023/11/17/battery-electric-vehicles-evs-supersonic-airliner-concorde/> [Professor Michael Kelly FRS is the *emeritus* Duke of Edinburgh Professor of Engineering at the University of Cambridge]. STOP PRESS: As this paper was in final production, the Government announced an intention to impose the Statutory Instrument entitled "The Vehicle Emissions Trading Schemes Order 2023" that was laid on 16 October 2023. [https://www.legislation.gov.uk/ukdsi/2023/9780348252453/pdfs/ukdsi\\_9780348252453\\_en.pdf](https://www.legislation.gov.uk/ukdsi/2023/9780348252453/pdfs/ukdsi_9780348252453_en.pdf). The order is a convoluted and punitive document of such insane complexity, worthy of the USSR's Gosplan, that it might have been drafted to discourage any future car manufacture in the UK. Consumers are forced to buy EVs by laying on manufacturers a requirement to pay a 'sin tax' (prescribed in the SI) of £15,000 per conventional vehicle 'above quota'. The parliamentary draftsmen install elaborate sliding scales embellished with profusion of detail, to define quota. Manufacturers will doubtless pass on this penalty to consumers if they prefer to buy a new ICE vehicle. This SI shows the Regulatory State in its full, disgraceful pomp and this arcane parliamentary device could, also be seen as a way of circumventing the Prime Minister's publicly stated decision to push back the ban on ICE sales to 2035. Nevertheless the PM said what he said; and regardless of this underhand regulatory move, the Overton Window shifted. That in itself is a political ratchet action.
33. N. Eastwood, 'Car parking spaces will have to be bigger because of electric car fires: 1960s-era fire safety laws could be inadequate to tackle risks from EV batteries, says report', *Daily Telegraph*, 16th October 2023 <https://www.telegraph.co.uk/money/net-zero/burning-electric-cars-dunked-baths-water-stop-fires-spread/>. BEVs may catch fire less frequently than ICEVs (although sample sizes are sufficiently incommensurate to be definitive about that); but the much more difficult nature of li-ion battery fires is not. They are far more difficult to extinguish, creating enduring deep pollution too. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1168956/covered-car-parks-fire-safety-guidance-for-electric-vehicles.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1168956/covered-car-parks-fire-safety-guidance-for-electric-vehicles.pdf)

34. C. Parton, 'Dealing with the threat of Chinese cellular (IoT) modules' *Council on Geostrategy*, 3 May 2023, <https://www.geostrategy.org.uk/britains-world/dealing-with-the-threat-of-chinese-cellular-iot-modules/>.
35. 207,900 tonnes of cobalt – almost double annual global production; 263,600 tonnes of lithium carbonate – three quarters world production; at least 7,200 tonnes of neodymium and dysprosium – almost total world production; 2,363,500 tonnes of copper – more than 1/6th world production in 2018. See M. Kelly, *Achieving Net Zero: A Report from a Putative Delivery Agency*, GWPF Note 30, 2022. <https://www.thegwpf.org/content/uploads/2022/03/Kelly-Net-Zero-Progress-Report.pdf>
36. In other words, one that has amortised its manufacturing energy, which EVs rarely do because theirs is much higher and their life to scrappage much shorter
37. '...as a rule, new modes of economy will lead to an increase of consumption according to a principle recognised in many parallel instances...it is a familiar rule of finance that the reduction of taxes and tolls leads to increased gross and even nett revenues; and it is a maxim of trade, that a low rate of profits, with the multiplied business it begets, is more profitable than a small business at a very high rate of profit...No-one must suppose that coal [or any other dense stock of energy] thus saved is spared – it is only saved from one use to be employed in others and the profits gained soon lead to extended employment in many new forms.' W.S. Jevons, *The Coal Question* (1865), cit *The Worm in the Rose* p. 8.
38. Whether these latter-day self-appointed philosopher-kings advocating general austerity for others would personally enjoy the even simpler, property-less lifestyle prescribed for them by Socrates in his maximal prescription for social engineering is moot. Recollect Heinrich Heine's poem cited earlier. Socrates' interlocutor Glaucon is somewhat taken aback; and Karl Popper rightly saw the roots of totalitarianism in this remorseless system Qv Plato, *The Republic* Book V. Another reason why toleration is the pith of civilisation.
39. R. Pielke Jr, *The Climate Fix: What Scientists won't Tell You about Global Warming*, Basic Books, 2010. The relevant extract is at [https://sciencepolicy.colorado.edu/admin/publication\\_files/2010.47.pdf](https://sciencepolicy.colorado.edu/admin/publication_files/2010.47.pdf).
40. N. Stern, *The Economics of Climate Change*, CUP, 2007 (originally issued by H.M. Treasury, 2006) <https://www.lse.ac.uk/GranthamInstitute/publication/the-economics-of-climate-change-the-stern-review/>.
41. Hume: 'A man naturally loves his children better than his nephews, his nephews better than his cousins, his cousins better than strangers, where everything else is equal. Hence arise our common measures of duty, in preferring the one to the other. Our sense of duty always follows the common and natural course of our passions.' (Book 3, Part 2, Section 1, cit Lawson, *An Appeal to Reason*, p. 86.)
42. N. Lawson, *An Appeal to Reason*, p.87. Since the Stern Review came after the Blair government had embarked on action, Lawson regarded the exercise as purely propaganda, remarking that in his time as Chancellor he would have instructed the Treasury to conduct a thorough assessment before making such costly commitments. 'As a result, while its 692 pages contain much of interest, neither its conclusions nor the arguments on which they are based possess much merit.' (p. 21) Lawson tracks back the formal origin of Stern's welfare economics discount rate to Ramsay's 1928 theory of saving; and in a very long footnote (p. 83, n. 2, pp. 138–40) marks Stern's homework severely.
43. International Energy Agency, *Coal 2022: Analysis and Forecast to 2025*, December 2022 [this report is annually published in December]. <https://iea.blob.core.windows.net/assets/91982b4e-26dc-41d5-88b1-4c47ea436882/Coal2022.pdf>.
44. 2022 comparative domestic electricity costs in US\$: UK (42% fossil fuels), \$0.41/kWh; Japan (72% fossil fuels), \$0.25/kWh; France (70% nuclear), \$0.21/kWh; USA (60% fossil fuels) \$0.18/kWh;

China (83% fossil fuels), \$0.08/kWh; India (75% fossil fuels), \$0.07/kWh. Source: <https://www.statista.com/statistics/263492/electricity-prices-in-selected-countries/>.

45. Bloomberg News, 'China Could Control a Third of The World's Lithium by 2025' 13 March 2023 <https://www.bloomberg.com/news/articles/2023-03-13/china-could-control-a-third-of-the-world-s-lithium-by-2025?leadSource=uverify%20wall>.

46. L. Daftari, 'Beijing and Chinese Companies Seek to Control Africa's Rich Lithium and Cobalt Mines'. *The Foreign Desk, Epoch Times*, 22 June 2022.

47. R. Scruton, *Green Philosophy: How to Think Seriously About the Planet*. Atlantic Books, 2012, pp. 137–9.

48. M.E. Caine and G. Prins, *The Vital Spark: Innovating Clean and Affordable Energy for All*, The Third Hartwell Report, LSE, 2013 <https://eprints.lse.ac.uk/51077>.

49. Sir Julian Corbett, *England in the Seven Years War: A Study in Combined Strategy*, Longmans, 1918, Vol I, Ch VIII, p. 179 ff.

50. All renewables in the TPE (Total Primary Energy) global energy mix were 12.8% in 1971 and 14.6% in 2021 (IEA data: Chart drawn by Dr J. Constable, reproduced with permission).

51. G. Prins, 'General Elphinstone's Return: Biden's appalling mistake', *Briefings for Britain*, 20th August 2021, <https://www.briefingsforbritain.co.uk/lord-elphinstones-return-bidens-appalling-mistake/>.

52. L. Hannah, *Engineers, Managers and Politicians: The First Fifteen years of Nationalised Electricity Supply in Britain*, Macmillan, 1982, p. 98.

53. D. Yergin, *The Prize: The Epic Quest for Oil, Money and Power*, Simon and Schuster, 1991, pp. 558–61.

54. General Electric Steam Power, 'Ultra Supercritical and Advanced Ultra Supercritical technology' <https://www.ge.com/steam-power/coal-power-plant/usc-usc>.

55. Net Zero Watch, 'Government has surrendered to green lobbyists', 16 November 2023. <https://www.netzerowatch.com/government-has-surrendered-to-green-lobbyists/>. The new strike price for offshore wind (2012£73/MWh, or over £100/MWh in today's prices) brings it into line with estimates derived from windfarm financial accounts, which are normally in the range £100-125/MWh. For comparison, even at today's war-inflated wholesale gas price, a new gas-fired power station running flat out could deliver power at £70–80/MWh; older ones, running intermittently as they are today, might come in at £100/MWh. Prior to the Ukraine war, the figure was below £50/MWh.

56. This is a baseline Imperial study report citing especially primary papers on nanoparticles – irrespective of vehicle type. <https://spiral.imperial.ac.uk/bitstream/10044/1/101707/9/Tyre%20wear%20particles%20are%20toxic%20for%20us%20and%20the%20environment%200223-2.pdf>. The RAC has commissioned a report, defensive in tone, and seems to be batting hard to protect EVs from criticism: <https://www.rac.co.uk/drive/electric-cars/running/do-electric-vehicles-produce-more-tyre-and-brake-pollution-than-petrol-and/>. The RAC author particularly goes after George Eustace in his testimony before a House of Commons Select Committee (Questions 42): <https://committees.parliament.uk/oralevidence/3391/default/>; and an Emissions Analytics report plainly got them rattled: <https://www.emissionsanalytics.com/news/pollution-tyre-wear-worse-exhaust-emissions>. A tyre-fitting chain has this interesting comment: EVs on conventional tyres have heavy tyre wear, special hardened EV tyres less so but much more expensive – so people will economise; and people tend to accelerate EVs hard, for the thrill, which contributes to the type particulate problem <https://autoexhaustandtyres.co.uk/news/do-electric-cars-need-special-tyres/>. On balance one can observe that the physical circumstances are certainly real and the actual scale is variable dependant but also real enough that one would not choose to incur the health risks if avoidable. Which they are. Just stop trying to rig the markets.



57. Li-ion battery energy density in watt/hours/kilogramme: range 350–500; liquid hydrocarbon fuels: in excess of 12,500 (diesel 13,730).
58. L. Mendes de Souza, P.A.S. Mendes, D.A.G. Aranda, 'Oleaginous feedstocks for hydro-processed esters and fatty acids (HEFA) biojet production in southeastern Brazil: A multi-criteria decision analysis,' *Renewable Energy*, Vol 149, 2020, pp. 1339–1351.
59. A no-nonsense primer on why hydrocarbon aviation fuel is the fuel of choice is Chevron, *Aviation Fuels: Technical Review*, 2004, <https://www.chevron.com/-/media/chevron/operations/documents/aviation-tech-review.pdf>: 'Aviation is powered by petroleum fuels. This is not an accident; the choice is based on petroleum's recognized advantages. Liquid fuels have higher energy contents per unit volume than gases, and are easier to handle and distribute than solids. Among liquids, liquid hydrocarbons offer the best combination of energy content, availability, and price'.
60. Recent work suggests that a HEFA SAF with good anti-icing qualities can be made, although much research is still needed. J. Ugbeh-Johnson and M. Carpenter, 'The impact of sustainable aviation fuels on aircraft fuel line ice formation and pump performance'. *The Aeronautical Journal*, 127(1314), (2023). pp. 1287–1307. doi:10.1017/aer.2023.6. But, as the Chevron review notes, improving further the anti-icing qualities of JET-A1 (freezing point -47°C but pumpable below that temperature) is already possible, at a price, by addition of di-ethylene glycol monomethylether (di-EGME) as an FSII (Fuel System Icing Inhibitor pronounced 'fizzy'); and no bio syn-fuel can meet the whole spectrum of other qualities that hydrocarbon aviation fuels routinely provide, cited in the Chevron review. As with other green novelties, why substitute an inferior for a superior product?
61. 'Net zero "violates all the laws of engineering" says leading Cambridge Professor'. *Daily Telegraph*, Planet Normal podcast, 7 December 2023. <https://www.telegraph.co.uk/opinion/2023/12/07/planet-normal-net-zero-not-practical/>
62. J. Haidt and G. Lukianoff, *The Coddling of the American Mind: How Good Intentions and Bad Ideas are Setting Up a Generation for Failure*, Penguin, 2018.
63. John Constable, 'Energy, the Cornucopia of Opportunity', public lecture given as Visiting Professor at the University of the Hesperides, Las Palmas, Gran Canaria, 5 October 2023. <https://www.youtube.com/watch?v=LYHRngcYyB8>. Data: International Energy Agency.







For further information about Net Zero Watch, please visit our website at [www.netzerowatch.com](http://www.netzerowatch.com).

**NETZERO**  
WATCH