

SGR Responsible Science Conference 2022

Science superpower or techno dead-end: what would a globally responsible Britain look like?

Wednesday 19th October, online

Register for a free ticket at: www.sgr.org.uk/events

Programme

4.00 - 4.05 Welcome and introduction

4.05 - 4.20 **Session 1: Climate, carbon & conflict**

- **Is the war in Ukraine derailing UK action on climate and social justice?**
Dr Stuart Parkinson, SGR
- Q&A/discussion

4.20 - 5.05 **Session 2: False climate 'techno-fix' solutions**

- **Zero carbon aviation?**
Anne Kretschmar, Stay Grounded
- **Misleading marketing of electric vehicles**
Anna Jonsson, New Weather Sweden
- **Nuclear is on the front-line of climate change – and not in a good way**
Dr Paul Dorfman, Nuclear Consulting Group & University of Sussex
- **Drowning in confusion: negative emissions technologies and carbon offsetting**
Josie Wexler, Ethical Consumer
- Q&A/discussion

5.05 - 5.15 *Break*

5.15 - 5.50 **Session 3: Opportunities for a rapid transition to a sustainable future**

- **Lessons from the pandemic for rapid transition** Andrew Simms, SGR
- **Green New Deal and a just transition** Ann Pettifor, PRIME
- **Getting real: on the technology and behaviour
change of unavoidable emissions reduction** Kevin Anderson
- Q&A/discussion

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Summaries and speaker profiles

Is the war in Ukraine derailing UK action on climate and social justice?

As Putin's war in Ukraine continues, Britain's new Prime Minister Liz Truss is promising an enormous increase in military spending – up to 3% of GDP, a level more typical of a dictatorship than a democracy. At the same time, she's announcing a host of new licenses for North Sea oil and gas drilling, and is creating numerous other obstacles to further action on climate change. Efforts to tackle the cost of living crisis are poorly targeted – helping the rich twice as much as the poor – while massive 'temporary' cuts to overseas aid – implemented at the height of the COVID-19 pandemic – could become permanent. Boris Johnson promised that Brexit would help turn Britain into a 'science superpower', but the danger is now that it will become a technological dead-end, fuelling international arms races while its citizens freeze amid the accelerating climate crisis. What can be done to change things?

***Dr Stuart Parkinson** is Executive Director of Scientists for Global Responsibility, a post he has held for nearly 20 years. His career began as a student engineer in an arms company before ethical concerns led him to study for a PhD in climate science. From there, he worked as an academic researcher, including a period as an expert reviewer for the Intergovernmental Panel on Climate Change. He has written and spoken widely, including authoring reports on climate change and security, military technology, sustainable energy, nuclear weapons, and corporate influence on science.*

Zero carbon aviation?

In recent years the public discourse has changed in a way that flying is now recognised as a climate-relevant issue. However, with rising climate awareness and after the COVID-related bailouts, the aviation industry is now pushing harder than ever to greenwash flying, to create the false impression that it can continue with business as usual. It is advertising for net-zero 2050, based on yet to be developed technologies and "climate-neutral" flights. Behind the scenes the industry's lobby fights any meaningful aviation policies. Meanwhile, it has failed to meet practically all its climate targets in recent decades. Its arguments continue to be flawed. Small, short distance, prototype electric planes cannot even put a dent in the number of conventional, polluting flights. Also, all fuel substitutes have numerous problems associated with them: hydrogen planes won't be here for decades; producing synthetic fuels requires gigantic amounts of renewable energy, which is more efficiently used for grounded transport and needed in other sectors than in aviation; and agrofuels have adverse side effects and constraints – plus they only account for around 0.01% of all aviation fuel. All the so-called "green solutions" are mainly built to generate further profit for airlines, not to actually reduce emissions.

***Anne Kretzschmar**, socioeconomist and climate justice activist, is working as campaigner with the Stay Grounded Network, with a focus on movement building in Europe and debunking greenwashing and false solutions in the aviation sector.*

Misleading marketing of 'electric' vehicles

Plug-in hybrids are now intensively marketed as alternatives to electric cars. Sales have absolutely exploded in the past years, at least partly at the expense of cars without tail-pipe emissions. What appears to be a conscious greenwash strategy now blurs the boundary between fossil cars and electric cars. The hybrids are marketed with texts and images that depict them as electrically powered. In their statistics and communication, car industries group them with real electric cars under the concept rechargeable, the auto industry's most common buzzword. The confusion has gone so far that the term "electric car" is now used for all kinds of hybrids and real electric cars in both advertising and news reporting. An important reason for this development is shortcomings in the methodology used to calculate emissions from plug-in hybrids, WLTP. The problem is compounded by the auto industry's often cynical and irresponsible marketing of plug-in hybrids.

***Anna Jonsson** is a co-founder of New Weather Sweden. She has a broad experience of environmental policy and the environmental movement. She has been chairing Friends of the Earth Sweden as well as being a political advisor at the Ministry of the Environment.*

Nuclear is on the front-line of climate change – and not in a good way

Climate models have run hot. As knowledge of enhanced climate sensitivity and polar ice melt-rate evolves, it has become clear that sea-level rise is significantly faster than previously thought, resulting in more frequent and destructive storms, storm surge, severe precipitation, and flooding. With rare extreme events today becoming the norm in the future, existing risk mitigation measures become increasingly obsolete. The corollary to this analysis is that present and planned UK coastal nuclear installations will be at significant risk. In other words, nuclear's lower-carbon electricity USP sits in the context of the much larger picture – that UK coastal nuclear will be one of the first, and most significant, casualties to ramping climate impact. Put simply, UK nuclear is quite literally on the front-line of climate change – and not in a good way. UK civil nuclear infrastructure is profoundly unprepared for climate impact and there is a very high probability that reactors and their associated high-level spent fuel stores will become unfit for purpose, and much sooner than expected.

***Dr Paul Dorfman** is an Associate Fellow, Science Policy Research Unit (SPRU), Sussex Business School, University of Sussex; Chair, Nuclear Consulting Group (NCG); Member, Irish Govt. Environment Protection Agency (EPA) Radiation Protection Advisory Committee (RPAC); Member, International Nuclear Risk Assessment Group (INRAG); and Nuclear Researcher, Greenpeace Environmental Trust. Paul served as Secretary to the UK Govt. scientific advisory Committee Examining Radiation Risks from Internal Emitters (CERRIE); led a European Environment Agency (EEA) response to Fukushima; served as Expert to the European Economic and Social Committee (EESC); Advisor to the UK Ministry of Defence (MOD) Nuclear Submarine Dismantling Project (SDP); Adviser to the French Government; and drafted sets of UK Department of Health National Health Service (NHS) guidance.*

Drowning in confusion: negative emissions technologies and carbon offsetting

Companies are increasingly making claims about being, or aiming for, 'carbon neutral' or 'net zero carbon' but these claims are of very variable quality. Carbon negative technologies will be needed for us to get to net zero but their capacity is very limited and they can't be a replacement for companies moving rapidly away from fossil fuels. Many companies' emissions reduction plans are beset with loopholes, cheating and bad practice.

***Josie Wexler** is a researcher and writer for Ethical Consumer magazine. She studied Environmental Technology at Imperial College London. She was joint author of the Zero Carbon Britain 2030 report at the Centre for Alternative Technology, which looked at how fast Britain could theoretically decarbonise the UK, modelling the energy, transport, land, industry and building sectors.*

Lessons from the pandemic for rapid transition

After a year of lethal, record weather extremes, coupled with the economic impact on people's livelihoods from dramatic fuel price rises, the urgent need for low carbon transition is greater than ever. Yet this is also threatened by retrenchment in the UK towards fracking and North Sea oil and gas. But we now have some of the lessons from living through the COVID-19 pandemic and what happened during periods of lockdown that suggest we can change everything from infrastructure to behaviour and economic policy, and should now significantly increase our ambition for the speed and scale of change. This period has been profound. Across the political spectrum measures were introduced that put public health before short term, private economic interests. It demonstrated also that we can make many of the changes that are needed in ways that will also make life better. Using this 'evidence-based hope' means we might actually be able to change faster than the climate.

***Andrew Simms** is assistant director of SGR, an author, co-director of the New Weather Institute, coordinator of the Rapid Transition Alliance and a research associate at the University of Sussex.*

Green New Deal and a just transition

When, as part of the Green New Deal group, formed at the time of the 2007-2008 financial crises, we published the original Green New Deal, it was an acknowledgement that investing in rapid, low carbon transition would bring multiple economic, climate and social benefits. While we have lost over a decade to inaction, a Green New Deal is still the policy that can achieve simultaneous progress in these core areas of our lives. I was recently invited by the Minister for Just Transition, Employment and Fair Work, Richard Lochhead MSP, to join Scotland's second Just Transition Commission for the duration of the current Parliamentary term. Its aim is to increase action to reduce greenhouse gas emissions while taking into account "the imperatives of a just transition of the workforce and the creation of decent work and quality jobs." Things learned here can teach lessons of implementation across the border in England as well, where policies are heading in the wrong direction.

***Ann Pettifor** is a political economist, Director of PRIME Economics and an author who writes about the impact of the international financial system on the economy, society and the ecosystem.*

Getting real: on the technology and behaviour change of unavoidable emissions reduction

Kevin Anderson holds a joint chair between the School of Engineering at the University of Manchester and the Centre for Environment and Development Studies (CEMUS) at Uppsala University. He recently completed two years as the Zennström professor of climate change leadership at Uppsala and previously held the role of director of the Tyndall Centre for Climate Change Research. Kevin publishes on his specialist areas in journals ranging from Science, to Nature and Nature Geosciences.

Kevin engages widely across all tiers of government (EU, UK and Sweden) on issues ranging from shale gas, aviation and shipping, through to the role of climate modeling (IAMs), carbon budgets and 'negative emission technologies'. With Uppsala colleagues, Kevin has made a key contribution to the development Paris-compliant carbon budgets for Swedish Län and Kommuner, and with Manchester colleagues, his analysis contributed to the framing of the UK's Climate Change Act and the development of national carbon budgets. Kevin has a decade's industrial experience, principally in the petrochemical industry. He is a chartered engineer and a fellow of the Institution of Mechanical Engineers.