

Sussex Energy Group

**World-class research for
transitions to sustainable energy**

Energy security

Consumer behaviour

Low carbon

Energy economics

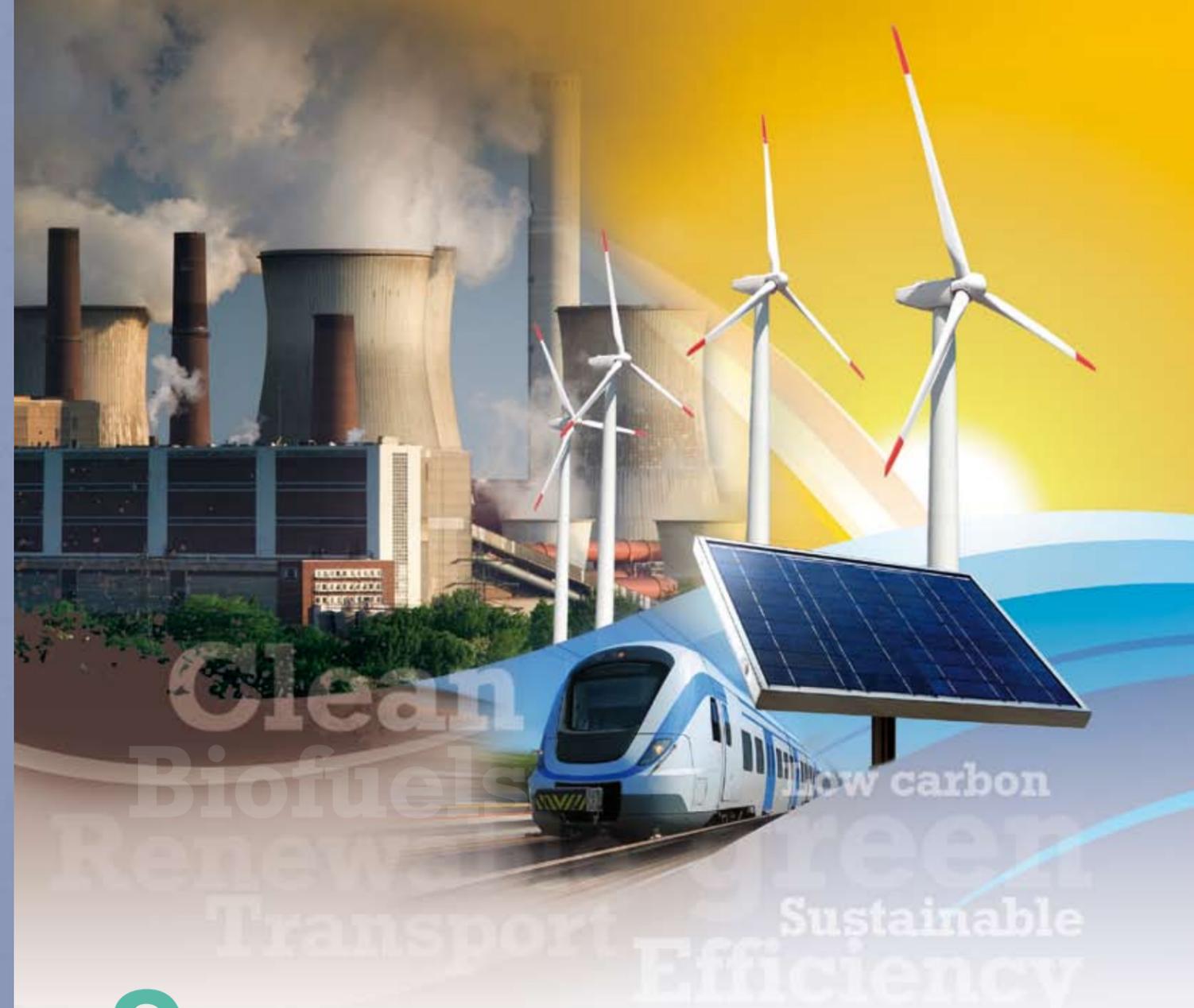
Nuclear power

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SPRU – Science & Technology Policy Research

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High-impact

energy policy research

We are trusted experts on the transition to sustainable, low carbon energy systems and are renowned for our high-impact research and policy advice. Our work informs policy makers, government departments and the media – not just in the UK, but worldwide.

Leading authorities

We have been producing world-leading, academically rigorous, inter-disciplinary research for over 40 years – which is how we gained our reputation for independence and impact.

Our researchers engage in the energy policy debate – from local government level to the United Nations Framework Convention on Climate Change.

The Sussex Energy Group is based at SPRU (Science and Technology Policy Research). Our inter-disciplinary researchers understand economics, technology and policy – a rare combination. Through SEG,

the University of Sussex plays a significant role in two world class interdisciplinary research centres: the Tyndall Centre for Climate Change Research and the UK Energy Research Centre.

High-quality research with a global reach

We conduct research and policy advice for a wide range of clients, including: Research Councils, private-sector firms, charities and government, both in the UK and internationally.

Our values

Our work is driven by three main values:

- 1 Quality**
World leading research and expertise of the highest standard
- 2 Independence**
Objective, clear thinking on energy policy
- 3 Impact**
Far reaching influence locally and world-wide

These stem from our desire to have a positive impact in the world.

Quality

World-class research for sustainable energy policy

“SEG and SPRU have a well-deserved reputation of being at the forefront of research on technology and innovation policy”

Lord Nicolas Stern of Brentford

With our base in an academic institution, high-quality research will always be a top priority. We rank highly on academic assessments; SPRU is among the leading institutions of its kind in the world. So our academic contributions – quality assured through various forms of peer review – are an important cornerstone of our work.

High-quality research must be independent, but this can not be achieved by remaining distant from decision-makers.

Independent thinking behind clean energy policy

We recognise that by having relationships with decision-makers in government, business and the third sector, researchers can be seen to lose their independence. Our answer is to interact with diverse groups from all sectors. We hear all views, but form an independent view of our own. We sometimes advise actors from individual sectors, such as businesses or NGO's.

Our carbon emissions scenario work for China used these methods. Initially, Jim Watson and Tao Wang held a workshop in China with participants from academia, research institutes and government. A second UK workshop engaged with academics, the Carbon Trust, the Office of Climate Change and DFID, and was

followed by interviews with a range of organisations about the draft scenarios. These activities ensured the ability of SEG researchers to remain independent by engaging diverse stakeholders.

We deliberately seek independent and diverse funding sources to maintain our independence; from several Research Councils, government departments, private firms, and a range of non-governmental organisations.

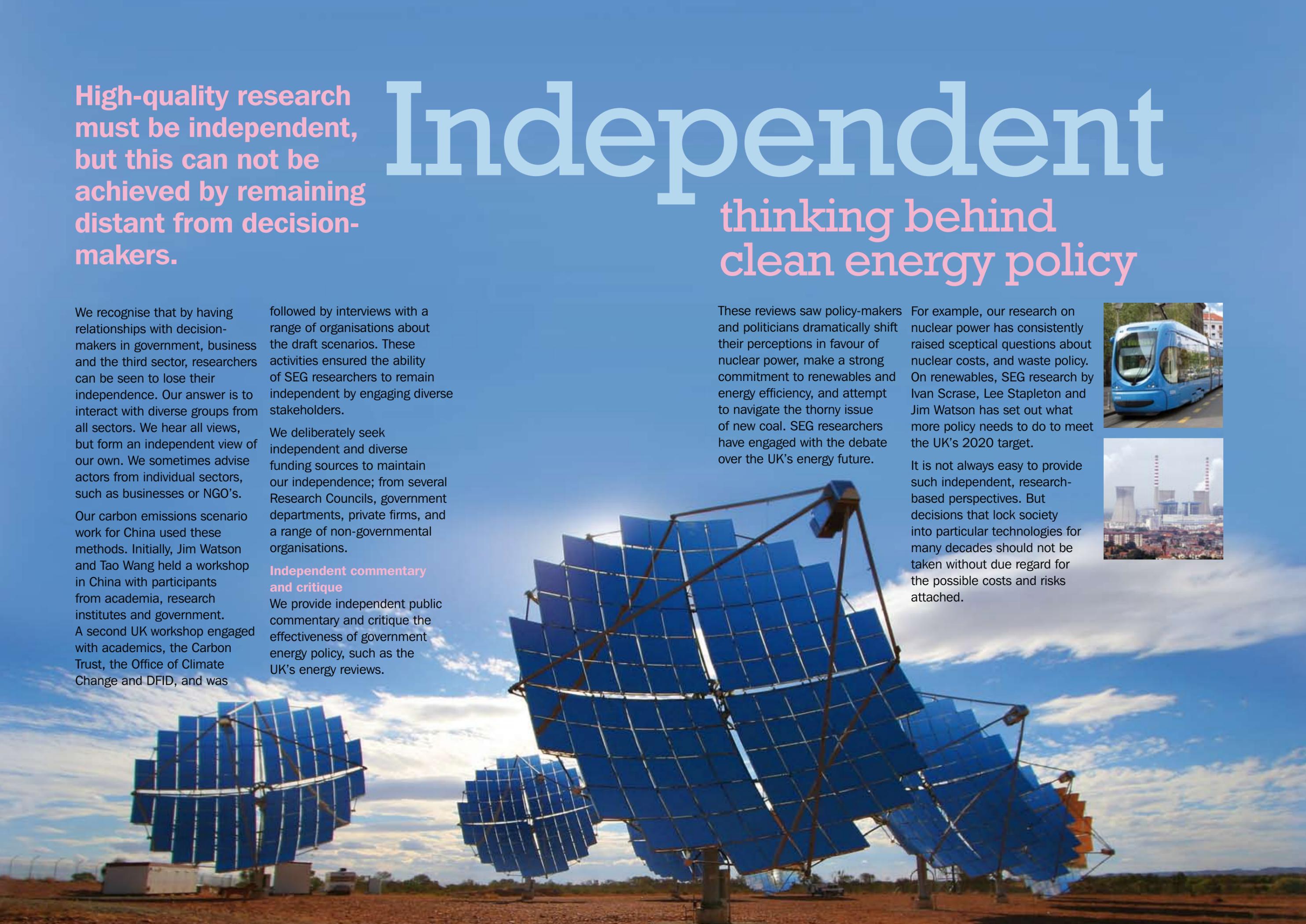
Independent commentary and critique

We provide independent public commentary and critique the effectiveness of government energy policy, such as the UK's energy reviews.

These reviews saw policy-makers and politicians dramatically shift their perceptions in favour of nuclear power, make a strong commitment to renewables and energy efficiency, and attempt to navigate the thorny issue of new coal. SEG researchers have engaged with the debate over the UK's energy future.

For example, our research on nuclear power has consistently raised sceptical questions about nuclear costs, and waste policy. On renewables, SEG research by Ivan Scrase, Lee Stapleton and Jim Watson has set out what more policy needs to do to meet the UK's 2020 target.

It is not always easy to provide such independent, research-based perspectives. But decisions that lock society into particular technologies for many decades should not be taken without due regard for the possible costs and risks attached.



We impact both the policy world and our academic peers worldwide.

Our impact is due to high-quality research, our independence from any particular interests, and our ability to communicate across boundaries. While we publish dozens of high-quality peer reviewed academic papers each year – the bedrock of our reputation for quality and academic impact – these are seldom read by decision-makers.

We therefore work to ensure our research can influence energy policy. For example, a team led by David Ockwell, Jim Watson and Alex Mallett made significant contributions to the search for a new global deal on climate change – focusing on low-carbon innovation in developing countries. David spoke at many events in the run-up to the climate change negotiations in Copenhagen, often on platforms with Ministers and

senior negotiators. This work was the first winner of the new 'Green Gown Awards', Research category.

Far-reaching impact

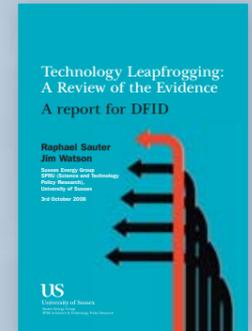
Our researchers have international influence: Sigrid Stagl briefed the Austrian Chancellor's climate change advisor on participatory appraisal; Frank Geels, Florian Kern and Adrian Smith and are leading contributors to international academic debates on energy transitions; Andy Stirling is collaborating with the University of Tokyo on energy diversity.

SEG researchers including Rob Byrne and Oliver Johnson are also advising

the UK Department for International Development on the World Bank Climate Investment Funds. SEG previously undertook commissioned research for DFID on technological leapfrogging, launched at the climate talks in Poznan, Poland.

Long-term impact

As academics, some of our impact will be long-term, through activities such as publishing and teaching. We supervise 15 doctoral students from around the world. We also teach at Masters level, including on our own MSc on Science



Impact

High-quality research with a global impact

and Technology for Sustainability, and are involved in setting up new MSc programmes at Sussex on Climate Change and Policy / Development.

Other long-term sources of influence include our joint book, Energy for the Future. This discusses the causes of inertia in energy systems, and the impact of these on responses to climate change and energy security.



Research's greatest influence is often through its authors and the connections they make with decision-makers.

SEG attracts researchers from diverse disciplinary backgrounds in the UK and world-wide. This is partly why we have such a far-reaching international influence. We have a core team of 13 people, and also integrate the research of our doctoral researchers.

Jim Watson, Director of SEG, has advised House of Commons select committees, the Foresight Programme and has briefed the Government's Chief Scientific Advisor and several Ministers. He is an established media commentator and has given high-profile talks at prestigious organisations such as the Royal Institution.

Steve Sorrell, Deputy Director of SEG, recently reviewed conflicting evidence on whether world oil production has peaked for the UK Energy Research Centre in the most wide-ranging review of its kind worldwide. Prior to this review, Steve wrote influential research

on economic 'rebound effects' – where money saved through energy efficiency is spent on other energy use, and therefore has little overall benefit. He presented his findings to three government departments and the Carbon Trust.

Gordon MacKerron, Director of SPRU and Associate Director of SEG, has been an influential commentator and advisor on energy policy for 30 years. One of the world's foremost experts on the economics of nuclear power, Gordon's advice has been sought in international court cases, as Chair of the UK Government's Committee on Radioactive Waste Management,

in the Sustainable Development Commission's advice to government on the viability of new nuclear and most recently as economic advisor to the Royal Commission on Environmental Pollution.

Andrew Stirling, Director of Science at SPRU is influential around the world in sustainability and technology policy research. Andy is a member of Defra's science advisory committee. Recently, his framework for analysing security and resilience influenced the thinking behind the UK Energy Research Centre's 'Energy 2050' project.



Jim Watson

Steve Sorrell



Gordon MacKerron

Andrew Stirling

Influential

Leading authorities on international energy policies



SEG, Freeman Centre