



Greening UK energy:

business opportunity or brake on growth?

Proceedings of a meeting held by The Royal Academy of Engineering

19 June 2012

With the economy stagnating, arguments around environmental policies and their effect on growth have suddenly taken on increased importance. The question central to this is whether the UK's environmental policies are having a positive or negative impact on business in the UK in terms of competitiveness, growth, investment decisions and where companies choose to base themselves.

The Academy brought together a panel of industry representatives to discuss this question and unpack the issues around it.

Chair

Evan Davis – Economist and broadcaster. Presenter of Radio 4's *Today* programme, *The Bottom Line* and BBC 2's *Dragons' Den*.

Panel, in speaking order

Sir Alan Rudge CBE FEng FRS – Chairman of the ERA Foundation, Deputy Chairman of Experian Group Limited and Chairman of the Board of Management of the Royal Commission for the Exhibition of 1851.

Jane Atkinson FEng – Vice President Utilities Operations of Sembcorp UK Limited. She is responsible for the day-to-day operations and maintenance of the Utilities business on Wilton International including the UK's first biomass power plant.

Gareth Stace - Leads EEF's work on a broad range of environment policies that affect the UK manufacturing sector. Most recently Gareth has co-authored the EEF publication *Green and Growth: Solutions for growing a green economy*.

Juergen Maier – Managing Director of Siemens UK and Ireland Industry Sector, a leading global supplier of industrial plant and software, manufacturing automation and drive technologies to industrial customers across the UK.

Full biographies of the speakers available in Appendix A

Key points highlighted by the discussion

- **An industrial strategy is required.** *The whole [industrial system](#) found within the UK needs to be included in this.*
- **Policy stability is vital.** *Companies need to make long-term decisions about investment in research, people and infrastructure.*
- **Cross party consensus is needed.** *To keep policies related to an industrial strategy stable long-term all sides need to agree.*

Opening statements

Sir Alan Rudge FREng opened by emphasizing the critical state of manufacturing industry in the UK and the need to give priority to encouraging its growth. He stated that the UK's imbalance of trade in goods with the rest of the world was now in excess of £100 Billion per annum, more than half of which was due to the deficit on manufactured goods. This deficit was not being made up by services and investment and the nation was continuing to borrow and sell assets to balance the current account. However, while manufacturing had declined to only 11% of the UK's GDP it was critical to the economy. Manufacturing still provided half of our exports and three quarters of business research and development. The 2008 Climate Change Act, while making no sensible impact on global CO₂ emissions, was encouraging a few heavily subsidised areas of activity while increasing the cost of energy to industry and the nation at large. Energy-intensive Industry would either be driven off-shore or damaged competitively while the public would suffer from high energy costs. He stressed that this was not good for the environment. To save the environment, we have to save the economy first since poor nations cannot afford to save anything. Relying upon heavily subsidised wind and solar technologies for base-load electricity, with all the expensive issues of intermittency and storage was not a sensible policy for a nation concerned with its industrial competitiveness. Moreover, the expected growth in extraction of shale gas would undermine all of these green sources as it would produce electricity much more competitively. Sir Alan recommended that a first step should be the repeal of the 2008 Climate Change Act. His position was that even if it made any sense in terms of global CO₂ reduction, which was very debatable, we just could not afford it.

Rather than repealing legislation **Jane Atkinson FREng**, called for policy stability. As a power and steam supplier to intensive energy users Jane said that cost did have a role in whether heavy industries continued to be situated in the UK, but that other factors such as cost of the workforce and regulatory environment also played a part. A 20-year industrial and energy strategy was needed so that suppliers could prepare for the energy needs of their consumers including future investment decisions. Cross party consensus would be needed to give this strategy the long-term stability it needed.

Greening the energy supply was possible if the energy it provided was affordable, said **Gareth Stace**. He argued that there was no such thing as a "green" sector. All industry could be green if it sought efficiencies and cut CO₂ outputs. The danger came if this was done but the effect was to increase costs and make the company uncompetitive in the global market. The work could then be transferred to manufacturers in other countries that were not as conscious of their environmental impact, leading to increased CO₂ output globally. The government had to consider carefully the cost to business of environmental regulation and

consider different approaches for each sector. Targets for decarbonisation should be set globally; this was the only way that CO₂ emissions would effectively be reduced.

Juergen Maier saw greening the economy and renewables technology as a massive opportunity for UK-based businesses. Though currently the government was subsidising the deployment of a lot of renewable technology, long-term it would reap benefits in terms of skills, R&D and inward investment. He disputed that energy costs in the UK were uncompetitive, as previous panellists had stated, and said that, as a manufacturer, issues such as a skilled workforce and whether there was a local market were more important when siting R&D and manufacturing hubs. However, UK-based companies were falling behind their European counterparts owing to lack of investment in greening their assets.

Discussion with panel and audience

The UK has highly innovative capability and a skilled workforce who are able to run things efficiently. Natural resources such as wind, wave and tidal stream are available in abundance, making it easier for the UK to develop technologies which utilise these resources.

It was suggested that currently the UK has the opportunity to be radical, support new businesses and industries, make those based in the UK more efficient, invest in R&D and create real value in the supply chain and for the UK.

The government is now starting to realise the importance of developing an industrial strategy to oversee some of this and work is already being done on making this happen. One of the focuses of this strategy could be the commercialisation of research. Innovations from the UK can fall into the [‘valley of death’](#) when it comes to trying to get them to market.

Once an industrial strategy is created it has to remain stable. It was pointed out that Germany has a reputation for being very good at supporting industry. In fact there were some problems with its regulation and policies, but because they had been stable for such a long time business understood them and could plan accordingly. The fact that the regulation was not perfect was less of an issue.

The point was also made that even if an area supported by an industrial strategy ultimately turned out not to be commercially viable, the spin-off benefits were huge in terms of R&D development, a skilled workforce and inward investment. For example, materials developed for the wind-energy sector now were being utilised by the aerospace industry.

Some members of the panel also said the government should appoint a senior advisor on energy and strategy and that all policies should undergo a green and growth test. If it failed either, the policy should not go ahead.

In terms of regulation, most of the panel agreed that the UK has no comparative advantage over other countries. A lot of this stemmed from concern about policy stability. An extreme example of this is businesses entering an area being subsidised by government to later find those subsidies removed with the election of a new government. This made it very difficult for businesses to do any long-term planning.

Subsidies in general were criticised as a policy tool, however, an audience member reminded the panel that the oil and gas industry had received around £30 billion in public

subsidies when establishing themselves in the 1960s. It was suggested that people with innovative ideas and good products would always find investment. Brompton Bikes was a good example of this.

Most present agreed that the UK needed a mixed energy supply and there was strong support for nuclear energy to be part of the mix. It was suggested that wind and other renewables would never be able to provide a base load supply. However, the smartness and size of the grid could influence this. A grid covering the whole of Northern Europe could potentially feed in electricity generated from wind from other countries when no wind was blowing in the UK.

How various types of industry would cope with the likely increase in energy costs was discussed. Some argued that the UK should try and keep the business already present. Others suggested that a post-industrialised country, such as the UK, was not going to be able to compete on cost with other developing countries in certain sectors, and that those sectors should be allowed to wane.

Appendix A

Chair

Evan Davis

Evan Davis currently presents Radio 4's Today programme, having previously worked as the BBC's economics editor and for BBC Two's Newsnight. He also presents The Bottom Line, Radio 4's business discussion programme and Dragons' Den, the BBC Two business reality show. In 2011 he presented a three part BBC2 series called Made in Britain (with an accompanying book) looking at the manufacturing and the other means by which Britain pays its way in the world. He has previously worked as an economist at the Institute of Fiscal Studies and the London Business School.

Evan has won several awards, including the Work Foundation's Broadcast Journalist of the Year award in 1998, 2001 and 2003, and the Harold Wincott Business Broadcaster of the Year award in 2001 and 2005. He has written and co-written several books, most notably Public Spending, and the Penguin dictionaries of economics and of business.

Speakers

Eur Ing Jane Atkinson FREng

Jane Atkinson is Vice President Utilities Operations of Sembcorp UK Limited. She is responsible for the day-to-day operations and maintenance of the Utilities business on Wilton International including the UK's first Biomass Power Plant. She began her career in 1990 with British Steel as a sponsored engineering student. During her time there she managed all of the major production units including an iron-making plant and a steel casting plant in Alabama, USA.

In 2007 Jane won the CBI First Woman Award in Manufacturing as she frequently has been at the forefront of women in engineering and industry. Following on from this prestigious award in 2008, 2009 and 2010 Jane was voted one of the 500 most influential people in the North East by the The Journal. Jane is the Chairman of the University of Teesside Science and Technology Advisory Board as well as Lead Diploma Employer Champion for the new 14 – 19 year old Engineering Diploma in the UK. She is also a Fellow of the Institution of Chemical Engineers.

Juergen Maier

Juergen Maier is the Managing Director of Siemens UK and Ireland Industry Sector, a leading global supplier of industrial plant and software, manufacturing automation and drive technologies to industrial customers across the UK. Prior to taking up this role in October 2008, Juergen held a number of senior European roles within Siemens in the UK and Germany, including Director of Industrial Controls, two Divisional Managing Director roles and Manufacturing Director of the award winning Drives Factory in Congleton, Cheshire.

Juergen supports a number of UK wide initiatives in support of Manufacturing and engineering skills including Board Membership of the Sector Skills council SEMTA and of the EEF, The Manufacturers' Organisation. He also holds a Non Executive Director role for a

SME manufacturing company in the UK called International Innovative Technologies based in Gateshead.

Sir Alan Rudge, CBE FREng FRS

Sir Alan Rudge is the Deputy Chairman of Experian Group Limited and Chairman of the Board of Management of the Royal Commission for the Exhibition of 1851. He is a past Chairman of ERA Technology Ltd and until December 2007 was a Pro-Chancellor of the University of Surrey. He was Deputy Chief Executive of BT until 1997 and was subsequently Chairman of WS Atkins until 2001, Chief Executive and then President of Celtel International BV and Special Adviser to General Atlantic Partners until 2004.

Sir Alan is a former Chairman of the Engineering and Physical Sciences Research Council, a past President of the Institution of Electrical Engineers and Chairman of the Engineering Council. He has served on a number of national committees including the Government's Advisory Committee on Science and Technology.

Gareth Stace

Gareth Stace leads the EEF's work on a broad range of environment policies that affect the UK manufacturing sector. This includes identifying barriers to resource efficiency and seeking solutions to enable industry to operate competitively within a global marketplace. Most recently Gareth has co-authored the EEF publication *Green and Growth: Solutions for growing a green economy*.

Gareth represents EEF on a number of government Boards and Panels, including the Defra Business Contact Group, the Environment Agency Regulated Business Forum and the Emissions Trading Group. He is also responsible for representing the interests of the UK steel sector and chairs the Manufacturers' Climate Change Group, which represents carbon intensive sectors, including cement, ceramics, glass, paper, steel and chemicals.