



Can a sustainable energy policy be delivered by the market?

Thursday 9 June 2005

Summary of key points from panel presentations

Panel: Chairman

Sir John Mogg, Chairman, Gas and Electricity Markets Authority – **JM**

Speakers

Elliot Morley MP, Minister of State (Climate Change and Environment), Defra – **EM**

Catherine Day, Director General, DG Environment, European Commission – **CD**

Philip Cox, Chief Executive Officer, International Power plc – **PC**

Bernard Bulkin, Chair, Energy & Transport, Sustainable Development Commission – **BB**

Introductory remarks – Sir John Mogg

Sir John noted that while the focus for this seminar was likely to be on **climate change and carbon reduction**, we couldn't afford to ignore the issues of **security of supply and affordability**, and the interplay between them, as these were all important parts of a sustainable energy policy.

Ofgem's principal objective to **protect the interests of consumers** meant that sustainable energy was important for Ofgem. Ofgem's goal was to ensure that action to tackle emissions was **cost-effective** and provided long-term **value for money** for customers.

To achieve this, Ofgem unashamedly considered that markets provide the best mechanism. The Government had broader aims, such as the development of **renewables**. Ofgem was concerned to ensure that intervention to achieve particular outcomes did not distort the market unnecessarily.

Ofgem also has secondary duties which include ensuring that contributing to sustainable development was a feature of decision-making.



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Elliot Morley MP

Energy was in the spotlight nationally and internationally, especially with climate change at the centre of the UK's presidencies of the G8 and of the EU.

The market had already secured **low prices**; it could also help secure the innovation needed to achieve a **low carbon economy**. The UK needed to show that tackling climate change could go hand-in-hand with a strong economy. Recent rises in carbon emissions demonstrated the need to do more.

The market could not deliver on its own – this was why the Government had set up the **Renewables Obligation** and the **Energy Efficiency Commitment**. The EU **Emissions Trading Scheme** was a key policy, providing a clear economic value for carbon. And **fuel poverty** was also being addressed through, for example, the **Warm Front** programme.

There were two basic mechanisms which could guide the operation of the market: **regulation** and **market-based instruments**. Clear regulation could provide companies with **signals** about the Government's objectives and provide **long-term certainty**. Market-based approaches (such as the RO and EU ETS) gave companies the **flexibility** to deliver objectives **cost-effectively**. Defra was examining the possibility of introducing trading under the EEC and in other areas.

The key challenges were:

- **tackling the rise in demand for energy** – for example by providing customers with feedback on their energy consumption
- **supporting distributed generation** – such as micro-CHP and small-scale renewables, and
- **supporting CHP** – creating reliable demand for heat would help both CHP and biofuels.

Government expected Ofgem to play a full part, in line with its statutory duties and guidance.

Government could not overcome these challenges without help. It remained committed to providing **sustainable, reliable and affordable supplies** through **competitive markets** but there were real issues to address in how we made markets work in a socially just way. We could be proud of what we had achieved but needed to do more.

Catherine Day

Climate change was one of the biggest challenges facing society. We needed to **break the link** between economic growth and **rising temperatures**.

The market was an efficient short-term delivery mechanism but needed mechanisms to take care of longer-term needs of society. The EU was committed to **liberalisation** – but this did not mean no **regulation**.

The challenge was to find the **right combination** – with Government setting the long-term policy framework but letting the market deliver in the most **cost-effective** way. The role of regulators was crucial.

The global challenge of **reducing greenhouse emissions** would mean major changes in the way we produce and consume. The long-term reductions needed looked all the more challenging given the



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difficulty in meeting **Kyoto targets**.

Across Europe, there was a major need for **investment in electricity generation**. Long-term policy objectives needed to fit in with **investment cycles**. The current trend of only deciding for the next 5 years was not sustainable.

Emissions trading was a success, but needed greater **transparency**, more harmonised criteria and less bureaucracy.

The market might be the best way to **re-engage the US**, as it had a track record of emissions trading. There was a prospect of eventually **linking** the EU ETS to a US cap and trade system.

Energy efficiency was increasingly on the agenda – there would be a Commission **Green Paper** soon. A target of reducing energy consumption by **20 per cent** by 2020 was achievable and necessary.

Government also needed to intervene in funding for **R&D**: the pattern of declining activity needed to be reversed. Issues such as **carbon capture** and **storage** would need a supportive policy framework.

Early **market deployment** would bring down costs. Wind might now be fully competitive within a decade. This was only possible because Government policies had supported early deployment.

The market could deliver, but not on its own. It needed the **correct regulatory framework** and the right time horizon for investment. EU environment and energy agendas were converging in order to deliver that objective.

Philip Cox

Sustainability was about a blend of **high environmental standards** with security of supply. A sustainable, secure electricity supply meant having an adequate reserve margin, a balanced fuel mix, healthy competition and affordable prices.

Increasing demand and the anticipated retirement of existing plant meant there was a need for **investment**.

International Power (IP)'s investment criteria required a clear **long-term energy policy** which was in synch with long-term investment and payback timescales. There also needed to be a **stable regulatory framework** so that the market pricing signal could act as a catalyst for new investment.

Strong competition was essential for long-term security of supply at **market prices**. IP did not want Government to interfere, but if they wanted to incentivise new build, it was time to think about **capacity payments** as a signal to the market to provide appropriate margins.

There also needed to be liquid and transparent markets that were openly traded.

IP supported **market-based solutions** and resisted artificial incentives for one sector of the market at the expense of another. **Capital-intensive investments** needed a consistent long-term framework.

The **Renewables Obligation** was an important part of the Government's climate change programme. There needed to be certainty that this would be in place in the long term. The RO had succeeded in promoting investment in **renewables**, but they could not be the main answer for replacing obsolescent plant.



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There was no value in having renewable generation if it was not linked to an **efficient transmission system**, so it was important to co-ordinate the programme of development, as had happened in Portugal.

The UK Government had taken a stronger line on carbon emissions than Kyoto. IP supported carbon trading, as a market-based solution. But the **electricity sector was bearing an undue burden**. Power stations accounted for 30 per cent of emissions, and had reduced them by **15 per cent** since 1990, while emissions elsewhere were rising. This would mean **higher energy prices** for the UK and a **cost disadvantage** for British business. The Government should consider targets for other sectors, rather than placing the burden on power generation.

Uncertainty over **allocations** was also having an impact on investment decisions.

There had been a lot of speculation about **nuclear**, which scored strongly on carbon emissions, but there were important question marks. New **baseload generating capacity** was needed, but at present all new build was **uneconomic** – including coal, gas and nuclear. If the market was to be relied on – a key investment criterion – there should not be selective support for nuclear.

The timeframe for new nuclear was not going to meet requirements over the next **10-15 years** and **fossil-fuelled capacity** would still be required.

In summary, the market was the optimum solution and there should be the **minimum of regulation**. Having set an overall framework, the Government should keep out of the way of market participants.

Changes to market structures should be **even-handed**, and not benefit or penalise one sector. If the Government did feel the need to intervene they should introduce capacity payments that were freely available to all sectors.

Bernard Bulkin

The Sustainable Development Commission strongly supported **Ofgem's new sustainable development duty**. Ofgem had taken this seriously, as reflected in the theme of the seminar.

The answer to the question posed in the title was yes and no.

Sustainable development was about integrating **economic, social and environmental objectives** over time. This meant **valuing nature** and adopting a **precautionary approach**; and working for efficient economies with properly **regulated markets** that promote **social equity**.

Applied to energy, a lot of the answer came down to **innovation**. The question was whether markets would advance this or keep it out. Markets can do either. It was **proper regulation** that would make the difference.

Regulation should focus on **outcomes**, not technologies. It should be stringent but allow long enough lead times to meet **investment cycles**. It should encourage innovation upstream, which was almost always cheaper. It should use **market mechanisms** – so emissions trading was the right way. And it should harmonise across fields.

Regulators needed strong **technical capabilities** to stop gaming by lobbyists. They needed to watch what was happening in other countries – staying ahead to maximise export opportunities, but not so far ahead that competitiveness was compromised. They should get industry involved in setting standards. And they should try to be **predictable**, not erratic.

Regulation should **level the playing field** so that innovative companies prospered.



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The market could deliver **renewables targets** – but only if they remained a firm commitment. The market could not incorporate the **cost of carbon** on its own, but the cost could be set using **market principles** which would allow the best technology to win.

Reducing the **energy consumption of buildings** was possible with proper regulation – but the regulation of demand and supply needed to be much more tightly coupled.

It was probably too much of a stretch for the market to decide whether **new nuclear** build was required – but market-based mechanisms could help.

Markets work if we want to make them work, rather than because of economic principles. Over time they can become too conservative and inward-looking. But **forward-looking policies** and political will could make them deliver. The challenge was mostly one for Government and regulators. It was only by companies, markets, governments and regulators all **working together** that there could be a truly sustainable energy policy.

Questions and Answers

Andrew Warren (Association for the Conservation of Energy) felt that new technologies were already being developed and asked how we might get new **techniques of delivery** in place.

BB pointed to the need for behavioural change. This had happened with smoking and seatbelts. New technologies would work with the grain of cultural change.

CD argued that there was an ongoing need for **investment** in new technologies.

JM pointed out that **research in energy** was on the point of drying out. The recent **distribution price control review** had introduced **incentive schemes** for R&D. Professional bodies were concerned about replacing the existing **skilled technical workforce**. This was a major issue for the UK.

Guy Nicolson (e-connect) felt that having the **lowest prices in Europe** was part of the problem as they did not encourage energy efficiency. Would the Government or the regulator push up prices to **encourage efficiency**?

JM indicated that not many people felt prices needed to go up further.

EM noted that increased prices act as a **spur for investment** but that there was also a **social and economic impact**. We needed to encourage new technologies for energy efficiency. Ideally this should be driven by the market, but there was an issue about how to use **fiscal levers** to encourage **good practice**. The **Climate Change Programme Review** was looking at a **range of policies** to meet the UK's emissions targets.

PC noted that the market was delivering **increased fuel prices**. The demand and supply sides needed to be in sync. Participants were not scared of new technology. Promoting different behaviour needed to be up-front and clear.

BB felt that promoting efficiency was part of tackling lack of capacity. PC agreed with this.

Colin Sawyer (IBM) raised the issue of **smart metering**. IBM had a number of projects around Europe but these had not got off the ground in Britain and suggested that the 28-day rule might be acting as a barrier.

JM invited Steve Smith, Managing Director, Markets, to comment for Ofgem. He noted the **trial suspension** of the 28-day rule and indicated that Ofgem's **supply licence review** would take these issues on board.

JM pointed out that while strong representations had been received about the difficulty with the 28-day rule, the response to the trial suspension in the first few months had been minimal.



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EM said that the 28-day rule had not been put to him as a major obstacle, but there was a need to look at all **potential barriers**. Experimentation was welcome. There was evidence – for example, from the installation of water meters – that customers did respond to **good information** about their consumption.

PC felt there was an issue as to whether **demand management** could answer the supply issues in the right timescale, given the pressures on **generation capacity**.

Gareth Wynn (EdF) believed that the market could deliver sustainability, but it needed **stability**. The investment needed was huge and this entailed a need for **clarity** on policies regarding the price of carbon. What were the barriers to creating stability **across Europe**?

EM noted that the EU ETS was a **new scheme** and that activity would rise. The **2nd phase** would extend it further. Ultimately the EU scheme would go global and this would provide a **stimulus for innovation**.

CD wanted the EU ETS to be a genuinely **market-based instrument**: she couldn't say what the price of carbon would be, but she could say that **emissions trading** was here to stay. Opening the scheme up to **aviation** and other sectors was being considered, and they were hoping to extend it globally. The Commission wanted it to be a **permanent feature** so that it was a part of **investment calculations**. Participants would have to take a view on the future price of carbon and factor it in.

BB felt that people would develop instruments to cope with the market in carbon.

PC argued that the sooner there was a global, liquid market in carbon, the better.

Fred Dinning (ScottishPower) talked of the "elephant in the room": the tension between a desire for **long-term certainty** and the **need for change**. He asked panellists to state two things they would change if they could change nothing else for the next 20 years.

CD wanted a **long-term emissions target**, fixed for at least 20 years, preferably longer.

BB felt that the **planning system** for wind and nuclear power needed to be made more efficient.

EM argued we needed to push ahead with **emissions trading**; and to ensure that the **Climate Change Programme Review** produced an increase in the **mix of generation**.

PC did not want any change – if there was one thing, it would be the introduction of **capacity payments**.

David Hirst (Responsive Load) argued that the price of a kWh of electricity varied throughout the day. He was confused about what the prime commodity being traded should be.

EM took the radical view that it should be **carbon**. The question raised the point about **two-way meters**: these could bring about dramatic changes.

Dr Brenda Boardman (Environmental Change Institute, University of Oxford), felt that energy efficiency was wrongly isolated from general energy policy.

BB strongly supported this point. If demand continued to grow at **1.5 per cent** a year, we would need **9,000 wind turbines**; if instead it fell by 1.5 per cent – which he felt was an easily achievable target – that number would halve.

EM felt that we could get a major hit from **energy efficiency**. A lot had already been achieved. Our **building standards** were poor – he was glad we had **new standards** coming into force. There was also the issue of "**white certificates**" – tradeable certificates for energy efficiency.



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CD said we would hear a lot more about energy efficiency in future with the upcoming **Commission Green Paper**. She wanted a debate about what sort of target we could have. Energy efficiency could produce better results, more quickly than anything else – it was an exemplar of the **win-win scenario**.

PC argued that generators would like to get in on this. They were not here just to sell more power, but to make an **acceptable return** on what they did sell.

JM noted that Ofgem was trying to do more to **recognise the importance** of energy efficiency.

Eddie Hyams (Energy Saving Trust) strongly supported market mechanisms and noted that as energy efficiency improved, consumption tended to rise; he advocated the creation of an **Energy Efficiency Obligation**, so people could trade. The networks were still designed for top-down generation. How could we get to the stage where individuals can invest in **demand-side initiatives**?

JM referred to the need for massive investment for **network reinforcement** and new connections. The distribution price control review had incentivised the process so that it rewarded **actual connections**.

BB felt there was a need to look at **locking in efficiency gains** – for example, every time a dwelling became vacant, it could be required to be brought up to the latest standards. The effect of **labelling fridges** had been high; this needed to be extended across the range of white goods, especially televisions. People needed to know how much items such as **patio heaters** were adding to their fuel bills – it was a lot.

Tony Grayling (IPPR) felt that the **EU ETS** was vital to meeting Kyoto targets, but argued that there was an inefficiency in it because of **'grandfathering'**. Wouldn't it work better if there was an **auction of allowances**?

CD agreed; the **review of the scheme** would look at auctioning.

Matthew Rhodes (Encraft) argued that customers did not realise they had power in the market. Energy policy ended up as a **debate between Government and industry**, as opposed to other markets where **consumers drive change**. Was it possible to bundle products together or to invest directly in customers by 'feed-in tariffs' so that people knew they would get a decent return from **generating electricity**?

EM felt that there was a need to keep the **structure of generation** constantly under review.

Oliver Harwood (Country Land and Business Association) felt that the discussion had skirted round the issue of the **gap in electricity supply** going forward. Markets were not internalising the **wider long-term costs** and he did not feel it was rational to build more and more wind turbines, given how many would be needed to meet the gap.

EM argued that there needed to be a **mix of technologies**, but at the moment wind was the **most advanced** and available. In the short term wind would account for about **70 per cent** of new renewables. It was misleading to talk about the number of turbines needed, as they were getting bigger and **more efficient**.

BB agreed that no one thing would solve the problem. At the moment wind was the cheapest renewable; **tidal** was much more expensive, and while it may get cheaper, at the moment it was not **commercial**.

PC concurred with this view. A blend was needed, as it was hard to see how wind could fill the gap on its own. A **free and open market** with certain regulatory backdrop was good news, as this allowed participants to identify opportunities.

Gill Owen (Public Utilities Access Forum) argued that everything seemed to suggest a need for **more draconian intervention** on the demand side and asked whether the panel thought there could be a **market solution**.



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EM felt that the market had an important role to play in **keeping costs down**, but that the **regulatory framework** was needed to make up for **market failures**.

CD agreed – what was needed was the right combination of **intelligent regulation**.

Liz Anderson (Anderson Grounds & Co) noted that there were a number of different initiatives to **reduce carbon emissions** but that they all placed a different value on carbon. She felt that there needed to be a **coherent value of carbon**, including in the **transport** sector.

EM felt this was one area for exploration at the forthcoming **G8 summit** at Gleneagles. Potential solutions such as **carbon capture** needed research and development funding.

CD pointed out that the EU has a **global target for temperature change** and that we needed to work back from that. It was not just transport that needed to be tackled; **agriculture** was also a significant source of emissions.

PC noted that power generation accounted for only 30 per cent of emissions; the other **70 per cent** was a big prize.

Andrew Bainbridge (Major Energy Users' Council) wanted the Government to stop playing musical chairs with key personnel, in the name of stability.

EM pointed out that he had been involved in these issues in both Opposition and Government since 1987.

Closing remarks

JM thanked the audience and the panel, and drew attention to the **next seminar** in the series, on **fuel poverty**, in **October**.