House of Commons
Environmental Audit Committee

A Green Economy

Twelfth Report of Session 2010–12

Volume I

Volume I: Report, together with formal minutes, oral and written evidence

Additional written evidence is contained in Volume II, available on the Committee website at www.parliament.uk/eacom

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Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty’s Ministers; and to report thereon to the House.

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The Reports of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in a printed volume.

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Summary

Current patterns of growth and development are unsustainable and much focus has been placed on developing a green economy to address this challenge—protecting the planet, creating jobs and securing energy supplies. International efforts to deliver a step-change on this agenda will be taken forward by the Rio+20 Summit, where world leaders will come together to set out a clear vision of the green economy and agree a framework for action. For the Government to be a credible voice at the Summit, it must ensure that it has put in place a strong domestic policy framework to drive the transition to a green economy in the UK.

The Government has set out its approach on a green economy in Enabling the Transition to a Green Economy. However, it is a missed opportunity to show global leadership on this area at a crucial time in the run-up to the Rio Summit. It does not set out a new, comprehensive or strategic approach for a green economy with targets to assess progress, but rather lists existing policies. It lacks a long-term vision of a green economy, and it is not the ‘roadmap’ to get us there that was earlier promised. The definition adopted by the Government crucially does not address all three interdependent pillars of sustainable development, including the social pillar, well-being and environmental limits.

Placing no new requirements on business, the Government’s market-led approach is too focused on voluntary action. Relying on consumer demand to stimulate the green economy will not work. The recent financial crisis has demonstrated that there are clear risks from such a market-based approach, particularly when markets do not reflect the value of nature.

Enabling the Transition suggests things that businesses could, rather than should, do. However at a time when businesses need policy certainty, this is unlikely to provide the platform to deliver the billions of pounds of green investment needed. The Government must set key time-bound milestones towards a green economy for businesses to achieve, such as reduced emissions, waste, and resource use and a halt to activities harmful to the environment. Consumers must also be aware of the impact of their decisions, through better information on their consumption choices and through requiring mandatory greenhouse gas reporting from business.

There appears to be little priority in Government attached to moving to a green economy, and it is not clear how all Government departments are taking this agenda forward. The current focus on growth must not be growth at all costs. In particular, we are concerned that the Treasury sees the environment as a cost or block to economic development. Budget 2012, the first after the publication of Enabling the Transition, lacked any indication that the Treasury has embedded the green economy into its economic plans, but rather plans for new roads and increased oil and gas extraction.

The Government needs to take the longer-term view. The whole economy needs to be green and traditional sectors of the economy will need to be transformed. To achieve this, the Government’s overall strategy must be improved by:

• Revising its definition of a green economy to include all three pillars of sustainable
development, including social considerations, well-being, and environmental limits.

• Creating a dedicated unit to examine the relationship between growth, prosperity and quality of life. A greater understanding is needed of how best to generate economic activity and jobs, while at the same time promoting sustainability and living within environmental limits.

• Setting out a clear trajectory to a green economy with targets, and action required from business in key areas such as resource efficiency, emissions and waste reduction. Transparent reporting arrangements will be integral.

• Agreeing a basket of indicators and targets against which regular reporting should be completed and the success of the Government’s approach gauged.

The Government should also bolster its current policy levers in three areas, by:

**Strengthening roles**

• Delegating to an independent body, perhaps the Committee on Climate Change, a role in setting tariffs and charges aimed at reducing emissions to provide greater policy certainty and reduce political risk to business and investors.

• Tasking an independent body, possibly the Office for Budget Responsibility with an extended mandate or the Natural Capital Committee with an obligation to report publicly, to examine the linkages between the state of natural capital and economic policy, and to provide advice on whether growth in the economy is being achieved at the expense of stocks of natural capital.

• Strengthening the role of the Green Economy Council by:
  
  o broadening its representation to include civil society. This, combined with greater transparency of its actions, would help demonstrate that the green economy is not just a business agenda, provide public confidence that a green economy is being pursued in a fair and inclusive way and help publicise the work of the Council.
  
  o Giving it an explicit remit to advise Government on how green infrastructure can be enhanced, building on the recommendations of the Ecosystem Markets Task Force.
  
  o Giving it a role in monitoring progress towards a green economy, including reviewing and reporting on progress in developing indicators, and then once developed, regularly reporting against those indicators.

**Improving strategy**

• Quantifying those ‘environmental limits’ that are most affected by economic activity in the UK, and building those limits into a green economy strategy.

• Setting out a date by which the Government will publish its definition of an environmental tax. Excluding particular taxes would provide no incentive to increase
them, and without such a definition it would not be possible to measure whether the Government is meeting its commitment to increase the proportion of environmental taxes. Greater consideration should be given in future Budgets to supporting the green economy.

- Setting out how data on natural capital in the National Accounts would be used in policy development and assessing progress towards a green economy; and developing targets for improving the state of the environment.

- Producing a green skills strategy to ensure that skills and training are adequate to meet the aspirations of green economy policies.

- Setting out how it intends to use government procurement expenditure to develop markets for green goods and services, and what specific changes it intends to make to meet the requirements of the Public Services (Social Value) Act.

- Testing the effectiveness of voluntary guidance for businesses on how to measure their impacts on natural capital and exploring what further research is needed.

**Setting minimum standards**

- Introducing mandatory emissions reporting by business as soon as possible.

- Developing with stakeholders and business minimum sustainability standards which could attract wide acceptance.

- Developing indicators and targets by which progress towards a green economy can be measured. These should capture the state of the environment, social fairness and well-being (going beyond economic indicators such as GDP), as well as progress in ‘decoupling’ economic activity in the UK from resource consumption. The appropriateness of including any Sustainable Development Goals agreed at the Rio+20 Earth Summit should also be examined.
1 Introduction

1. On coming to power in 2010, the Government set its ambition to “build a new economy from the rubble of the old: [one] that supported sustainable growth and enterprise, balanced across all regions and all industries, and promoted the green industries essential for the future”.1 The Department for Environment, Food and Rural Affairs is charged with coordinating efforts across Government on the green economy.2

2. In October 2011 we published a Report on preparations for the Rio+20 Summit.3 As we described in that Report, there is an impending global environmental crisis. Ecosystems are being depleted,4 and some ‘planetary boundaries’ may have been breached and others were approaching. Evidence was mounting that the current patterns of economic growth were unsustainable because they undermined the availability of natural resources and ecosystem services. Demand for natural resources has doubled since 1966, and 1.5 planets worth of resources are being used to support current activities—that is, 50% more natural resources than the Earth can sustain in the long-term.5 That position was made more unsustainable still when the global population is expected to rise from 7 billion today to 9 billion in 2050.6 The Royal Society believed that as both population and material consumption continued to rise, “signs of unwanted impacts and feedback and of irreversible changes were growing alarmingly”.7

3. In the UK, the Government’s National Ecosystem Assessment found that gains in agricultural production and national development over the past half-century had resulted in a rapid decline in ecosystems.8 It also found that the UK is “increasingly drawing on the services of overseas ecosystems to support its own economic growth”, with over one third of the biomass (food, fibre, timber, biofuels etc) used in the UK being imported.9 Demand for oil and gas show no sign of reducing in the future and will be increasing, met by imports.10 The Government expects that “access to critical natural resources such as water and minerals could be constrained in the future”, for example recent export restrictions on ‘rare earth’ elements by China have constrained supplies,11 and the availability of some of these materials is already having an impact on UK businesses.12 Emissions in the UK jumped by 3.2% in 2010 (the latest data available),13 but once the emissions that are hidden

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2 Qq 149-156
7 The Royal Society, People and the Planet, April 2012.
8 UNEP-WCMC, The UK National Ecosystem Assessment: Synthesis of the Key Findings, June 2011.
11 Ev 109
in the goods and services we import are taken into account the increase in emissions is much higher.\textsuperscript{14}

4. One of the two themes of the Rio+20 Earth Summit in June 2012, designed to address this prognosis of unsustainability, is the ‘green economy’. That wider international context inevitably shapes action in the UK, which is the focus of this Report.

**Our inquiry**

5. Against that background, we examined the Government’s efforts at building a green economy; an economy that more closely reflects sustainable development. We examined whether the Government is taking the opportunity to deliver change that will reduce our impact on the environment and improve fairness and well-being.

6. In Part 2 we explore the type of green economy we should aspire to. In Part 3 we explore the Government’s role in delivering the green economy, and in Part 4 we review how progress towards the green economy should be measured and monitored.

7. We received nearly 50 written submissions and took oral evidence from academics and NGOs; Government officials; Rt Hon Caroline Spelman MP, Secretary of State for Environment, Food and Rural Affairs; and Chloe Smith MP, Economic Secretary to the Treasury. We focused in one evidence session on wind renewable energy as a case study for the wider green economy issues. Subsequently, we were able to put further questions to the Economic Secretary as part of our inquiry into Budget 2012.
2 Defining a green economy

Definitions

8. There are many different interpretations of what constitutes a green economy. In the current economic climate many have been focused on developing environmental goods and services—so called ‘green growth’. The Packaging Federation believed that the concept of a green economy has been inextricably linked with the steps that are being taken to re-balance the economy and support a regeneration of private sector growth.\(^\text{15}\) The Government calculated that the environmental goods and services sector employs over 914,000 people in 52,000 companies in the UK and includes wind power, building technologies and alternative fuels.\(^\text{16}\) The UK had a 3.7% share of the £3.2 trillion global market in 2009–10.\(^\text{17}\) That global market is predicted to grow to £4 trillion in 2015,\(^\text{18}\) and the Government believed that it offers the potential for UK firms to grow their businesses, both in the UK and through increasing exports.\(^\text{19}\)

9. Some witnesses however saw a green economy as a new economic model, tackling perceived failures of the current one, and not just a way of stimulating ‘growth’ in response to the recent global downturn. Dr Alex Bowen of the Grantham Research Institute on Climate Change and the Environment believed that a green economy was “one where the needs of current generations are not fulfilled at the cost of future generations”.\(^\text{20}\) James Meadway from the New Economics Foundation believed that a definition limited to ‘green growth’ could be seen as a “barebones minimum” and to address seriously the “environmental problems we are facing” a “far more extensive definition” was needed.\(^\text{21}\) Andrew Raingold from the Aldersgate Group told us a green economy was more than just about a flourishing environmental business services sector: “It is also about modernising traditional sectors and transforming conventional business models”.\(^\text{22}\) Oxfam were looking for a “paradigm shift; a new model of growth and development”.\(^\text{23}\) Stakeholder Forum believed that “all the tools of economic management need to be reset to steer the economy in a more sustainable direction”.\(^\text{24}\)

10. Such new economic models seek to recognise that there are ‘limits’ that the environment places on sustainable economic activity, and potentially that there are certain absolute physical barriers to growth that a genuinely green economy would not overstep.\(^\text{25}\)

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\(^\text{15}\) Ev w8
\(^\text{16}\) BIS, \textit{Low Carbon and Environmental Goods and Services report for 2009–10, July 2011.}
\(^\text{17}\) Behind the US (20%), China (13%), Japan (6%), India (6%) and Germany (4%).
\(^\text{18}\) HM Government, \textit{Enabling the Transition to a Green Economy: Government and business working together, August 2011.}
\(^\text{19}\) HM Treasury and BIS, \textit{Plan for Growth, March 2011, p. 6.}
\(^\text{20}\) Q 50
\(^\text{21}\) Q 1
\(^\text{22}\) Q 16
\(^\text{23}\) Environmental Audit Committee, Eighth Report of Session 2010-12, \textit{Preparations for the Rio+20 Summit, HC 1026, Ev 4.}
\(^\text{24}\) \textit{Ibid.; Ev 35.}
\(^\text{25}\) Q 1 [James Meadway]
The Stern Review referred to climate change as “present[ing] a unique challenge for economics: it is the greatest and widest-ranging market failure ever seen”. The Stockholm Resilience Centre identified nine ‘planetary boundaries’ in 2009 within which “humanity can operate safely”, of which three might already have been exceeded: ecosystem biodiversity, climate change and the nitrogen cycle. Some favoured a definition of a green economy where the natural environment was not just protected, but enhanced. Long-term economic stability and growth is “fundamentally dependent” on the availability of natural resources and ecosystem services. They provide the resources needed to produce goods and services, and absorb and process the unwanted by-products in the form of pollution and waste.

11. The Government’s National Ecosystem Assessment identified how the environment is critically important to human well-being. It provides food, water, fibre and other raw materials, but it also benefits us in less obvious ways such as the “breakdown of waste products, controlling water supplies, helping to regulate climate, providing space for recreation and contemplation, and playing a pivotal role in creating a sense of place that underpins the mental and spiritual well-being of many”. Nature enhances children’s education, personal and social skills, health and well-being, leading to the development of responsible citizens. Natural environments have the potential to improve mental and physical health. The New Economics Foundation publishes a Happy Planet Index which measures the ecological efficiency with which, country by country, people achieve long and happy lives. It found that there are different routes to achieving comparable levels of well-being and that “high levels of resource consumption do not reliably produce high levels of well-being”. The UK came 74th in the Index, out of 143 countries.

12. Some of our witnesses emphasised that a green economy was not just about accommodating environmental limits but protecting the social pillar of sustainable development. Molly Scott Cato from Green House believed that “the green economy is not the same sort of economy powered differently. It is an entirely differently structured economy that is ... more about the good life and less about how much stuff you have”. Green House believed that “recognising the economy is located within society, which is in turn embedded within the environment” was the key change required. Jules Peck from Abundancy Partners believed that a focus on green growth—“effectively putting a green

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27 Johan Rockstrom and others, A safe operating space for humanity; Nature, vol. 461, No. 7263, pp. 472-475 (September 2009). The other boundaries identified were: the ozone layer, chemical dispersion, ocean acidification, freshwater consumption, land system change and atmospheric aerosol loading.
28 Ev w68; Ev 93
29 Ev 70
32 HM Government, Natural Environment White Paper, Cm 8082, June 2011, paragraph 1.27.
35 Q 89
36 Ev 65
veneer on what is an obsession with growth”—was creating a “conceptual roadblock” to producing “flourishing lives for everybody”.37

13. Professor Tim Jackson, a former Commissioner of the Sustainable Development Commission, saw the green economy in terms of ‘social justice’ and fairness, where “a green economy ... must be one that is consuming resources on a per capita basis that if equitably shared across a population of 7, 9 or 10 billion people could still remain within resource constraints”.38 While well-being flows from the environment, it is also dependent on other factors. The Government’s Measuring National Wellbeing Project is seeking to devise a set of well-being indicators that can be used to drive government policy, and the Office for National Statistics has been consulting on indicators that link well-being to relationships, health, what we do, where we live, personal finance, education and skills (paragraph 102).39

14. The United Nations Environment Programme links together the environmental and social aspects, seeing the green economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”.40 The European Commission’s Towards a low carbon economy in 2050 takes a narrower view and looks at how a low carbon economy can be achieved in different sectors.41 Similarly the OECD’s Towards Green Growth report focuses on “fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies”.42

15. The UN’s preparatory work for the Rio+20 Summit is seeking a degree of consistency in the definition of the green economy, and the approach to transitioning to it. It views a green economy very much in the context of sustainable development. The ‘zero draft’ of an outcomes document to be agreed at the Summit states that a green economy should “contribute to meeting key goals—in particular the priorities of poverty eradication, food security, sound water management, universal access to modern energy services, sustainable cities, management of oceans and improving resilience and disaster preparedness, as well as public health, human resource development and sustained, inclusive and equitable growth that generates employment, including for youth”.43 Being so widely-defined, however, the zero draft does not provide “a rigid set of rules”, given the different social, environmental and economic conditions of different countries, but envisages rather a decision-making framework being developed to foster integrated consideration of the three pillars of sustainable development in public and private decision-making.44

37 Q 3
38 Q 1
39 Ev w94
41 European Commission, A Roadmap for moving to a competitive low carbon economy in 2050, March 2011.
43 UN, The future we want, January 2012, paragraphs 25 to 27.
44 Ibid.
16. A broad definition of a green economy that encompasses environmental limits, well-being and social justice, will be demanding because it “challenges lifestyles, global commitments, and ideas about global trade”. However, a definition of a green economy limited to just growing the environmental goods and services sector is not consistent with all aspects of sustainable development. The whole economy will need to be green and traditional sectors will need to be transformed. This will require the Government taking a longer-term view, driven by a clear definition of a green economy. The Government must set out a clear definition of a green economy that addresses all three interdependent pillars of sustainable development, including ‘social’ considerations, well-being and environmental limits.

Making a transition to a green economy in the UK

17. Moving to a green economy could be a “multiple win”—protecting the planet, creating jobs and securing energy supplies. As the Rio+20 ‘zero draft’ recognises, the transformation to a green economy should be an opportunity for all countries and a threat to none. Clearly, however, there will be costs as well as benefits.

The benefits

18. By recognising that the environment might place restrictions on economic activity, a green economy could deliver clear environmental benefits. Aligning the economy to deliver Climate Change Act emissions targets would help demonstrate internationally that the UK is taking a strong stance on climate change. The Government estimates that by 2020 we could be importing 45-60% of the oil we use, and 70% or more of our gas. Significant reductions in oil demand are not expected over the next 20 years and gas demand is expected to increase as gas-powered electricity generation replaces coal-fired power stations. As global demand for oil and gas increase, prices will be volatile. Supporting renewable sources of energy as part of the transition to a green economy will help reduce our dependence on oil and gas imports, thus improving energy security and resilience. Greater stability in energy prices is possible through greater provision of domestic renewable resources, which could bring greater financial stability for both

45 Q 2 [Professor Tim Jackson]  
46 Q 2 [Professor Tim Jackson]  
47 Ev w85; David Cameron, in a speech to the Confederation of British Industry, 25 January 2010, said: “It’s a triple win. It will help secure our energy supplies, protect our planet and the Carbon Trust says it could create 70,000 jobs”. Available here: http://www.number10.gov.uk/news/speeches-and-transcripts/2010/10/creating-a-new-economic-dynamism-56115  
48 UN, The future we want, January 2012, p. 6.  
49 Ev 109  
53 Q 53 [Dr Gordon Edge]
businesses and consumers and attract greater investment in a more resilient economy.\textsuperscript{54} Meeting the 2020 renewables targets would displace fossil fuels with a cumulative value of £60 billion to 2020, whilst stimulating domestic investment in renewable energy, thus giving a “significant boost to the UK’s balance of trade”.\textsuperscript{55}

19. The European Commission identified the green economy as one of three ‘areas’\textsuperscript{56} where there was strong job growth potential as European economies recovered from the recent economic crises and restructured in a changing global economy.\textsuperscript{57} WWF believed that there was “strong evidence to show that the renewables industry could generate substantial employment and economic benefits if the UK takes up the opportunity of early action in the sector”.\textsuperscript{58} Similarly, the Aldersgate Group believed that “acting early will ensure that the UK is well positioned to attract global investment, stimulating job creation and export growth”.\textsuperscript{59} The Renewable Energy Association and Innovas brought together for the first time employment data on all renewable energy types (and associated supply chains), finding that 110,000 jobs were employed in the industry in 2010–11. This was set to rise to 400,000 jobs in order to meet the 2020 renewable energy targets.\textsuperscript{60} The Committee on Climate Change has highlighted that given “adequate funding, new policies and strengthened delivery arrangements” UK firms could lead on development in offshore wind, wave and tidal technologies.\textsuperscript{61} WWF considered that building a strong domestic supply chain was the key potential economic benefit, citing Germany where over 367,000 people were employed in its renewables industry.\textsuperscript{62} The Government estimates that energy efficiency in particular will boost employment, with 65,000 jobs created in the UK within five years as a result of the proposed Green Deal.\textsuperscript{63}

20. Putting the natural environment at the centre of economic decision-making would ensure a more sustainable use of natural resources. The UN’s Economics of Ecosystems and Biodiversity study showed that protected natural environments can deliver economic returns that are 100 times greater than the cost of their protection and maintenance.\textsuperscript{64} Creating a market that takes account of such costs and returns “could unleash sizeable macroeconomic benefits by boosting private spending, creating jobs, generating tax revenues, and allowing the monetary authorities greater leeway to stimulate demand”.\textsuperscript{65} The Government announced in the Natural Environment White Paper the creation of an Ecosystem Markets Task Force to review opportunities for UK business from expanding

\begin{itemize}
\item \textsuperscript{54} Ev w82
\item \textsuperscript{55} Renewable Energy Association and Innovas, Renewable Energy: Made in Britain, April 2012.
\item \textsuperscript{56} Other two areas identified were ICT and Healthcare.
\item \textsuperscript{57} European Commission, Towards a job-rich recovery, April 2012.
\item \textsuperscript{58} Ev 70
\item \textsuperscript{59} Ev 93
\item \textsuperscript{60} Renewable Energy Association and Innovas, Renewable Energy: Made in Britain, April 2012.
\item \textsuperscript{61} Committee on Climate Change, Building a low-carbon economy—the UK’s innovation challenge, July 2010.
\item \textsuperscript{62} Ev 70
\item \textsuperscript{63} DECC, Impact Assessment accompanying Green Deal and Energy Company Obligation consultation document, November 2011.
\item \textsuperscript{64} TEEB, The Economics of Ecosystems and Biodiversity in National and International Policy Making, 2011.
\item \textsuperscript{65} Ev 76
\end{itemize}
trade in green goods and the market for sustainable natural services. It will report to the
Green Economy Council.  

21. UNEP calculate that global investment in greening the economy will result in higher
growth than an equal amount of ‘brown’ investment within 5–10 years. A green economy
would bring other economic benefits such as fostering innovation by requiring solutions to
decarbonise and encourage entrepreneurialism as new markets are created. Action on the
green economy would help avoid falling behind in technology, and being shut out of future
markets. Increased efficiencies are possible for businesses using less resource inputs, and
reduced costs from less waste. Research for Defra estimated that UK businesses could save
around £23 billion and 4% of total emissions (29MtCO₂e) annually by using resources more
efficiently. The Carbon Trust found that a 35% improvement is possible in the energy
efficiency of UK buildings by 2020, and that this would realise over £4bn worth of
benefits.

**The costs**

22. The transition to a green economy will not be easy, however, requiring all sectors of the
economy to change, and in the short-term there may be increased costs in some areas.
There had been opposition to the Government’s support for wind power because of fears
of the cost of subsidies. Dr John Constable of the Renewable Energy Foundation believed
that the green economy debate had overlooked the downsides: “there is an implication that
not only are there multiple simultaneous wins or winners, but that no one loses and there
are no losses”. He believed that “given the transitional risks, you have a very large churn
effect, very large sums of money being dispensed in subsidy”, and that the gains would be
“small in relation to the risk”. At a time when energy costs are increasing there were
concerns that a green economy could disproportionately contribute to those price
increases. However, Dr Gordon Edge of RenewableUK disputed this. So far, domestic
ergy price rises had been primarily driven by the global price of gas. Research by the

Policy Makers*, 2011.
68 Grantham Research Institute on Climate Change and the Environment (Mattia Romani, Nicholas Stern and Dimitri
69 *Ev 109*
71 “Full letter from MPs to David Cameron on wind power subsidies”, The Telegraph, 5 February 2012.
72 John Constable, *The Green Mirage: why a low-carbon economy may be further off than we think*, July 2011.
73 *Q 61*
74 A November 2011 Panorama documentary for the BBC attributed ‘expensive’ renewables for the rise in energy
prices.
75 *Q 54*
76 *Q 82; Ofgem, Why are energy prices rising?* (factsheet 108), October 2011; DECC, *Estimated impact of energy and
climate change policies on energy prices and bills*, November 2011; Committee on Climate Change, “Household
energy bill increases caused primarily by rising cost of gas not environmental policies” (Press Release), 15 December
2011.
Policy Studies Institute found that recent oil price rises had been driven by global demand, not taxes imposed by Government.77

23. Some have expressed concerns about a risk of “technology lock-in” and the “premature adoption of sub-optimal and costly technologies”.78 Policy Exchange considered that “the history of Government ‘picking winners’ in terms of future export industries is not good, and such policies have often resulted in a huge waste of resources”.79

24. WWF believed that the transition would be capital-intensive, with high up-front costs for renewable energy systems, smart grids and energy efficiency. As such investment paid dividends over the longer term, it presented a “fundamental challenge for both markets and governments”, which focus on performance measured over shorter timeframes.80 The Grantham Research Institute believed that given some of the transition costs there would be a “small sacrifice of consumption”, but that this would “yield substantial gains down the road”.81 John Constable believed that the transition would require a shift in lifestyles, perhaps reduced standards of living, and some people would be relatively disadvantaged.82

25. The Stern Review demonstrated that the cost of inaction on climate change was likely to be more over the longer-term than the costs of acting now, because global costs of climate change could be between 5% and 20% of GDP a year if no action were taken. The investment needed would itself have a strong and positive impact on growth and provide further benefits beyond the reduction of the risks of climate change.83 The Government recognised that “there will be increased costs of some resources, and changing patterns of investment and innovation towards green activity” and that it would “need to take into account the distributional impacts on certain households and sectors”.84

26. The current economic difficulties offer an opportunity to rebuild the economy with a closer regard to sustainable development. The Grantham Research Institute believed that currently, with high unemployment and low utilisation of plant and equipment, “now is a very good time to accelerate the greening of the UK economy”.85 There would be little risk of ‘crowding out’ alternative investment, or displacing jobs elsewhere because output was running below capacity and the cost of capital was at historically low levels.86 The issue was a lack of confidence to invest, rather than a lack of liquidity.87 (Indeed, as we found in our

77 Policy Studies Institute, Road transport fuel prices, demand and tax revenues: impact of fuel duty escalator and price stabiliser, February 2011.
78 John Constable, The Green Mirage: why a low-carbon economy may be further off than we think, July 2011.
80 Ev 70
81 Ev 76
82 John Constable, The Green Mirage: why a low-carbon economy may be further off than we think, July 2011.
83 Grantham Research Institute on Climate Change and the Environment (Mattia Romani, Nicholas Stern and Dimitri Zenghelis), Policy Paper: The basic economics of low-carbon growth in the UK, June 2011.
84 HM Government, Enabling the Transition to a Green Economy: Government and business working together, August 2011.
85 Ev 76
86 Grantham Research Institute on Climate Change and the Environment (Mattia Romani, Nicholas Stern and Dimitri Zenghelis), Policy Paper: The basic economics of low-carbon growth in the UK, June 2011.
87 Ibid.
Green Investment Bank inquiry, significant pension and insurance fund management companies were seeking secure long-term investments. The Environment Secretary thought that the current economic situation was spurring businesses to embrace the green economy, in particular resource efficiency, as it was essential for their economic survival. That imperative for action was heightened by concerns that the UK, and Europe, is losing ground in the green economy ‘race’ to other countries, particularly China and India.

The impact on employment

27. The UN Environment Programme identified the potential impact on jobs from a transition to a green economy:

- Additional jobs would be created (as for example in the manufacturing of pollution-control devices added to existing production equipment).
- Some employment would be substituted (in, for example, shifting from fossil fuels to renewables, or from truck manufacturing to train manufacturing, or from landfill and waste incineration to recycling).
- Jobs could be eliminated without direct replacement (as when packaging materials are discouraged or banned and their production is discontinued).
- Many existing jobs would simply be transformed and redefined as skill sets, work methods, and profiles are greened (for example plumbers, electricians, metal workers and construction workers).

In a global context UNEP found that overall there were “no significant differences in overall employment between business-as-usual and a green investment scenario”.

28. As regards the position in the UK, our predecessor Committee found in 2009 that the Government had not carried out research in the UK to assess the likely overall impact on existing industries and jobs from decarbonisation. There is still a need for such an assessment. The current Government has acknowledged that there is a risk of a loss of jobs as a result of ‘carbon leakage’ and plans to introduce a package of measures to help “those energy intensive industries whose international competitiveness will be most affected by our energy and climate policies”. John Constable of the Renewable Energy Foundation believed that, based on modelling by the European Commission, “the probable

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89 Q 258
90 The Aldersgate Group cites research by HSBC that predicts the share of the three largest industrialised low carbon markets (EU, USA and Japan) will fall from 60% in 2009 to 53% in 2020, while the share of the three leading major emerging markets (China, India and Brazil) will grow from 25% to 34%. [Ev 93]
91 Worldwatch Institute for UNEP, Green Jobs: Towards decent work in a sustainable, low-carbon world, 2008, p. 3.
93 Environmental Audit Committee, Second Report of Session 2008-09, Green Jobs and Skills, HC 159-I.
94 Ev w106
95 Ev 109
impact of renewable energy and climate policies will have only ‘slight’ net benefits in terms of GDP and employment (numbered in the low hundreds of thousands) in 2020”.96 The churn in the number of jobs, however, would be “enormous”.97 Establishing whether jobs will increase or decrease, is made more difficult because of different methodologies used by industry and the Government for measuring the number of jobs in the green economy.98 Government data identified 91,000 employees in the wind industry in 2010,99 significantly above the 9,200 reported by industry bodies.100 Similarly the Government estimates that 39,200 are employed in the solar photo-voltaic sector,101 compared to 25,000 estimated by an industry body.102 Jobs in the green economy can have wider benefits, beyond the numbers involved. The UN Secretary-General’s High Level Panel on Global Sustainability found that “employees have reported increased job satisfaction working for companies that embrace or promote sustainability principles”.103

29. There would be environmental, energy security and economic benefits from making a transition to a green economy. Putting the environment at the centre of the economy would help achieve sustainable use of natural resources. There are clear benefits of acting now, with the costs of inaction far greater if we wait. Expenditure involved in making the transition to a green economy would be an investment, not simply a cost. Investing in renewable sources of energy would increase our energy security by reducing our reliance on imported fossil fuels. Investment in a green economy could deliver more jobs overall than the same investment in the high-carbon economy, but there is little commonly agreed data on this. In order to build public support for a green economy, the Government needs to be clear with business and the public about how the costs of the transition, including the costs of inaction, compare with the benefits. In Part 3 we examine whether the Government is making that case sufficiently clearly.

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96 Q 58; John Constable, The Green Mirage: why a low-carbon economy may be further off than we think, July 2011.
97 Q 59
98 DECC, Draft Impact Assessment: Comprehensive Review Phase 2a Consultation on Feed in Tariffs for solar PV, February 2012, Annex A.
103 UN Secretary-General’s High-level Panel on Global Sustainability, Resilient people, resilient planet: A future worth choosing (Overview), 2012, p. 34.
3 The Government’s approach

Enabling the Transition to a Green Economy

30. *Enabling the Transition to a Green Economy: Government and business working together* was published in August 2011. Its publication was delayed from April 2011 so that it would “follow other key publications in order to maximise the degree of certainty [Government] can provide to businesses about future policy”. The *Natural Environment White Paper* was published in June 2011, but *Enabling the Transition* did not contain any substantive references to it. In October 2011 the Government published *Skills for a green economy: A report on the evidence*, intended to supplement the information on skills in *Enabling the Transition*.

31. BIS, DECC and Defra have set up a Green Economy Council to provide advice to Government on infrastructure, innovation, investment and regulation. The Council, chaired on a rotating basis by the three departments, brings together business leaders and ministers. The Council, which held its first meeting in February 2011, reviewed and contributed to drafts of *Enabling the Transition*. The main focus of the Government’s future work on the document, as well as monitoring progress, will be through the Council. Frank Price from Grontmij believed that the Council was “completely opaque” and questioned whether anybody outside of the Council would even know about it. WWF and Philip Pearson from the TUC believed that it should have broader representation from civil society.

32. *The Green Economy Council has an important role in any further development of the green economy agenda. Increasing its membership to include greater representation from civil society would demonstrate that the green economy is not just a business agenda. Transparency would give the public confidence that a green economy is being pursued in a fair and inclusive way. We recommend that the Council should publish an annual report of its deliberations as well as its assessment of progress towards the green economy, as part of a wider initiative to publicise the work of the Council.*

33. We heard concerns that *Enabling the Transition* did not reflect a wider view of the green economy and lacked a clear vision of what it was trying to achieve. Dr Edge from RenewableUK told us that the document was “quite slight”, being a “hotchpotch”
collection of what Government is doing in this area. It lacked an “overarching mind”.113 Similarly, the Aldersgate Group felt that it was undermined by a “lack of clarity on what it is trying to achieve”.114 The Living with Environmental Change programme believed it was not clear how progress might be measured and that “a stronger sense of the destination would help to engage businesses in the journey”.115 RSPB believed a lack of a clear vision would mean it would make no discernible change from business as usual.116

34. Before being published as ‘Enabling the Transition’, the anticipated document was referred to as a ‘Roadmap to a Green Economy’, which according to Defra’s Business Plan would provide “certainty and clarity for business and investors”.117 Andrew Lawrence from Defra, ‘Senior Responsible Owner’ for the document, told us that it was intended to answer questions that business and stakeholders had on the green economy, such as the definition of a green economy, what it would deliver, the implications for business, and how business and Government would work together, and to collate all relevant policies into a single document.118 The Environment Secretary told us in February 2012 that it satisfied business calls for “a clear direction of travel”, and that the document would be kept up to date.119

35. David Powell from Friends of the Earth believed it was significant that the word ‘roadmap’ was dropped from the title, believing it did not constitute a roadmap because it did not show what needed to be done to transform the economy sector by sector.120 Friends of the Earth highlighted that the document did not set out by how much environmental impacts needed to be reduced.121 Philip Pearson, a TUC representative member of the Green Economy Council, told us that the final draft of the document did not reflect what had been discussed at earlier Council meetings:

[There were two] drafts of the paper, which does not really look like the paper that was published in August ... The Council was beginning to engage itself ... in defining more clearly the role of Government ... and looking at the barriers to that transition. The document that was published was a communications document ... It did not really set forward a vision with a time frame for investment, how you would intend to get there and what the targets were. It was very different from the original piece.122

36. Andrew Raingold from the Aldersgate Group was of the view, however, that the “process suffered from a lack of ambition from the start rather than being weakened at the end” and that there was a need for a complementary “green growth strategy”.123 Defra, on the other hand, saw much in Enabling the Transition that was “quite radical and quite

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113 Q 80
114 Ev 93
115 Ev w85
116 Ev w22
118 Q 116
119 Qq 156, 216
120 Q 101
121 Ev 84
122 Q 98
123 Ev 103
ambitious”. They told us that it was a conscious decision for *Enabling the Transition* to be a compendium of what the Government was doing, and that it was never the intention for it to be a vehicle for a series of new policies. This was driven by feedback from business and others. The Economic Secretary told us that *Enabling the Transition* was intended to be a “set of principles” rather than a set of new policy programmes.

37. *Enabling the Transition* places no new requirements on businesses, but highlights areas in which they could aid the transition. It contains a summary of Government commitments on the green economy with corresponding actions that business “could do”. WWF did not see the Government’s role as “orchestrating the transition to a green economy from the top down”; rather it should “seek to create enabling conditions to foster bottom-up technological and social innovation oriented towards sustainable development”. James Meadway of the New Economics Foundation, on the other hand, told us:

> That rather passive voice dominates the documents and ... even the sort of minimal green economy, or greening of the existing economy, does not really look very likely on that basis.

38. Similarly, Paul Appleby questioned whether the measures in *Enabling the Transition* had the “teeth to instil sufficient confidence to leverage the vast amounts of money required at a time when recession and cost cutting permeate every aspect of the economy”. The Aldersgate Group believed the UK was “losing momentum in the green economy race” and that “there was only a small window of opportunity to assert leadership in the years ahead”. It called for a strong regulatory and fiscal framework which would be vital for success, combined with a concerted push to get behind those sectors that have competitive advantages. Friends of the Earth summarised the Government’s approach towards the green economy as “overwhelmingly ... focused on price signals, tackling market failures, voluntary agreements, and occasional regulation”. The Grantham Research Institute believed that, although relying on the market was “powerful in stimulating economic activity”, particularly for innovation, it was unlikely to lead to the best outcomes for society as whole: “the recent financial crisis showed us what can happen when mounting risks are ignored. There is wide recognition that on its own, the market failed to adequately police the market; it is unlikely to be best placed alone to safeguard the environment”. Jules Peck also believed the market was a “fundamental challenge” for

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124 Q 119
125 Q 148
126 Q 256
128 Ev 70
129 Q 13
130 Ev v26
131 Ev 93
132 Ev 84
133 Ev 76
businesses because it was set up in the wrong way and not focused on delivering well-being. He told us that:

... either current incumbents are going to have to look for different types of shareholders—co-operative, mutual, employee ownership type models—or Government is going to have to step in and give much more definition of fiduciary responsibilities of the finance sector around things like sustainable development, environmental and well-being issues.\(^{134}\)

39. Green House believed that the Government should be prepared to plan levels of crucial outputs, like renewable electricity, road usage, agricultural production and pollutants and take a stronger role in controlling corporations whose activities are destructive to the environment, including removing their licences to trade.\(^{135}\) The Aldersgate Group believed that the Government should systematically and transparently prioritise support for specific sectors of the economy where there were competitive advantages. It found an “inherent irony” in *Enabling the Transition*, where the Government set out its aim for business to take advantage of expanding markets in green products and services and exploit competitive advantage “yet sidesteps the fact that countries such as China are streaking ahead in large part because of their strategic, strongly interventionist approach”.\(^{136}\) RenewableUK told us that the imperative to transform the economy to sustainable patterns of production and consumption meant that:

> an element of direction will be required. This new form of direction should not be in the form of selecting specific technologies or companies to benefit from subsidy or other support, but there must be clear policy indications of the direction of travel and support for the sectors that are deemed crucial for the green economy transition.\(^{137}\)

40. RenewableUK saw the UK having “a leading position” in offshore wind, wave and tidal energy development and deployment and in a position to dominate the market.\(^{138}\) However, John Constable of the Renewable Energy Foundation was against the use of subsidies in the renewables market.\(^{139}\) He believed that “deep and complex intrusions” in the market were going to be “inherently fragile and susceptible to revision”. He suggested that there was a better chance of getting a smooth and productive green transition “if Government did less planning and faced the fact that the technologies are not there...”.\(^{140}\) Alex Bowen of the Grantham Research Institute believed that “overall, the framework policy should be intrusive enough to get the job done ... and to maintain public support they should be done in as efficient a way as we can devise”.\(^{141}\) He favoured “more pervasive but simpler policies ... perhaps with less detail. So, for instance, one carbon price for the economy rather than intervening in lots of different parts of the economy on lots of

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\(^{134}\) Q 9  
\(^{135}\) Ev 65  
\(^{136}\) Ev 93  
\(^{137}\) Ev 81  
\(^{139}\) Qq 65, 67-71  
\(^{140}\) Q 88  
\(^{141}\) *Ibid.*
different pretexts and ending up with a degree of incoherence”.142 Subsidies could support “innovative infant technologies” but these should be time-limited and targeted at innovation.143

41. The Minister for Energy and Climate Change told the House that the Government’s vision was not “heavy-handed regulation, punitive taxation, fat Government subsidies for the chosen few and the dead hand of state planning”, but rather “enterprise, the private sector, innovation and the genius of British business”.144 He said that the green economy, like the rest of the economy, faced a challenging time: “there are real barriers and obstacles to growth to be navigated ... the green economy does not exist in a vacuum, and these are tough times”.145 The Environment Secretary told us that the current economic difficulties were driving change. The combination of rising commodity prices and the need to innovate and grow was a “strong driver” on business to become more resource efficient.146 Defra’s Andrew Lawrence did not see Enabling the Transition as passive, but rather that it “tries to be very clear on different roles”, recognising that “the green economy is not entirely for Government to achieve and deliver”.147

42. The Government’s overall approach in Enabling the Transition is too focused on voluntary action, and relies primarily on the market to deliver the transition. The Government has not set out a new, comprehensive or strategic approach to the green economy, but rather listed existing policies. Defra promised a ‘Roadmap’, so we are disappointed that Enabling the Transition did not set out a clear trajectory to a green economy or any time-bound milestones for businesses to achieve.

43. The Government argued that a benefit of Enabling the Transition was that it brought all green economy policies together in one place. Janice Munday from BIS told us: “business has made the point to us that finding all of these policies and seeing them together was quite difficult when looking through [departments’] business plans”.148 She told us that business had welcomed the timeline set out in the document,149 as a tool for “business [to] interact with us more easily on the whole green economy agenda”. Enabling the Transition was “one of the most significant things that Government has produced to give business clarity”.150 Similarly, the Secretary of State for the Environment made the point that Enabling the Transition “sets out and synchronises the work across Government departments” to transition to a green economy and provided assurance to business that the Government “would sequence things in such a way that is manageable for them to cope with”.151 Adrian Wilkes from the Environmental Industries Commission did not agree

142 Q 80
143 Q 67 [Dr Bowen]
144 HC Deb, 5 March 2012, Col 633.
145 HC Deb, 5 March 2012, Col 630.
146 Q 258
147 Q 127
148 Q 117
150 Q 117
151 Q 237
with the significance of the timeline, however, and he told us that “it would not take an A-level student more than a couple of hours to read through the ENDS Report over the last couple of years and put this together. There is a lack of detail. We know these things are happening...” 152

44. The Government told us that “social enterprises have a potentially significant role to play in influencing consumer demand towards greener goods and services; they have the ability to exert influence from within communities, where they are trusted and can play an inspirational role”.153 Molly Scott Cato from Green House criticised the document, however, because it “reads very much like a conversation between business and Government”.154 Frank Price of Grontmij believed that the linkage between the document and other policy areas that would help support a “fundamental switch in our culture and our whole community” appeared to be lacking.155 Enabling the Transition does not mention the Measuring National Wellbeing project (paragraphs 13 and 102).

45. There were also concerns that key environmental policies were missing. The policies set out in the Natural Environment White Paper were not integrated into Enabling the Transition, but the document itself was accessible through a web link.156 This did not provide a holistic vision for sustainable growth.157 References to the Low Carbon Construction Action Plan and the Local Transport White Paper,158 and links to industries such as agriculture, water, conservation and tourism were missing.159 The Government told us, however, that it had not wanted to create a “heavy carry-around but an opt-in document, principally an online version, that people could then navigate” because “if they were all bundled together, the document would be enormous”.160 The local dimension was also absent from the document. Friends of the Earth believed that carbon reduction and resource efficiency were not on most councils’ priority lists because of a combination of funding cuts from Whitehall and a lack of a statutory framework for action in these areas.161

46. Enabling the Transition is business-focused, and as a result there are some clear policy omissions from the document, in particular the Government’s work under the ‘social pillar’ of sustainable development such as the Measuring National Wellbeing Project. The Government must be more explicit on how it will engage individuals, communities and local government on the transition.

47. Business certainty is crucial. John Lewis Partnership considered that the current green economy policy framework “was complex, uncoordinated and burdensome for business”
and called on the Government to take further steps to simplify the policy landscape and to commit to longer term horizons, in order to establish the certainty required for business to make investments”. In our inquiry on Budget 2011 and Environmental Taxes, we found a complex mix of environmental taxes and price signals, particularly for energy. In our current inquiry, the Aldersgate Group told us that there was “significant scope” to streamline taxes on the energy used in business and to harmonise carbon and energy reporting obligations in a single, reporting framework. Powerperfector told us that policy and fiscal overlaps had distorted investment decisions. The Wood Panel Industry Federation told us that the Renewables Obligation encouraged energy companies to burn material that would otherwise have its carbon ‘locked in’ by being processed by forest industries. Agri Energy were concerned that energy from bio-fuels was at risk of falling between stools: “we have found that DECC will tell us that sustainable bio-fuels are best directed to transport, while at the same time the Department for Transport will suggest that such fuel is best used in heat and power”.

48. In our Report on Budget 2011 and environmental taxes we noted that the Plan for Growth contained very little to drive the low-carbon economy and called for Enabling the Transition (then referred to as a ‘Roadmap’) to be integrated with it. Consolidating such economic plans could help ensure that actions are put in place in all areas of a green economy and ensure a ‘green’ element is embedded in all polices. All departments need to be engaged on the green economy agenda. The Economic Secretary told us that the principles of Enabling the Transition “will be throughout what we do”, so Enabling the Transition would be incorporated into future revisions of the Plan for Growth on a “qualitative level”. However the Treasury appears to see the environment as a cost or block to economic development. The Chancellor, in a speech in October 2011, said “Britain makes up less than 2% of the world’s carbon emissions to China and America’s 40%. We’re not going to save the planet by putting our country out of business”. In November he told the House:

We should not price British businesses out of the world economy. If we burden them with endless social and environmental goals, however worthy in their own right, not

162 Ev w44
164 Ev w109
165 It noted examples of duplicate policy and fiscal incentives, including: biomass boilers (ECA scheme and the RHI); heat pumps (ECA scheme and the RHI); solar thermal (ECA scheme and the RHI); and CHP (levy exception certificates under the CCL and ECA). Another example is the misalignment between the enhanced capital allowances (ECA) scheme for energy saving technologies for automatic monitoring and targeting, and the CRC. [Ev w66].
166 Ev w47
167 Ev w1
169 Ev 93
170 Q 29 [Adrian Wilkes]
171 Q 255
only will we not achieve those goals, but the businesses will fail, jobs will be lost, and our country will be poorer.\textsuperscript{173}

and

We will make sure that the gold-plating of EU rules on things such as habitats do not place ridiculous costs on British businesses ...\textsuperscript{174}

49. \textit{We recommend that the Government fully incorporates the principles of \textit{Enabling the Transition} into future revisions of the \textit{Plan for Growth}. What is needed is a green economy strategy which is Treasury-led and addresses the economy as a whole. Such a strategy should address how some of the policy tools available for a green economy could be strengthened, as we discuss below.}

**Strengthening policy tools**

**Reflecting environmental limits on growth**

50. \textit{Enabling the Transition} stated that “a green economy is not a sub-set of the economy at large, our whole economy needs to be green. A green economy will maximise value and growth across the whole economy, while managing natural assets sustainably”.\textsuperscript{175} Research by Defra indicated that some elements of natural capital might have critical thresholds beyond which sudden and dramatic changes may occur, some changes to natural capital may be potentially irreversible, and impacts may extend across many generations.\textsuperscript{176} The March 2012 \textit{Resource Security Action Plan} aimed to address concerns over the availability of some raw materials, which was already having an impact on UK businesses. Whilst not providing a list of resources critical to the UK economy, the Action Plan sets out the Government’s thinking in this area and its approach to tackle these issues, which focused on “facilitating businesses taking action where there is greatest scope to reduce risk and environmental impact and to capture value for the UK economy”.\textsuperscript{177} The Environment Secretary told us that the Government was seeking to “transition away from finite resources to renewable resources, so that we can continue to grow sustainably”.\textsuperscript{178} \textit{Enabling the Transition} did not however explicitly address environmental limits.

51. It is unclear whether the Government anticipates that growth can be secured in perpetuity. The Government’s Electricity Market Reform proposals to secure investment in energy, for example, are supply-side driven. The Government has projected the capacity needed and devised mechanisms to allow supply to reflect possible emissions ‘pathways’, but without seeking to constrain overall demand for energy.\textsuperscript{179} The Environment Secretary told us that the Government was “obviously conscious of the risks of crossing planetary

\begin{itemize}
\item \textsuperscript{173} HC Deb, 29 November 2011, Col 807.
\item \textsuperscript{174} HC Deb, 29 November 2011, Col 808.
\item \textsuperscript{175} HM Government, \textit{Enabling the Transition to a Green Economy: Government and business working together}, August 2011.
\item \textsuperscript{177} Defra and BIS, \textit{Resource Security Action Plan: Making the most of valuable materials}, March 2012.
\item \textsuperscript{178} Q 240
\item \textsuperscript{179} Ev 84
\end{itemize}
boundaries and causing irreversible damage to our ecosystems” and she hoped that at the Rio+20 Summit it would be possible to tackle the nitrogen cycle through looking at sustainable agriculture and the water cycle. However, we can see little evidence of the consideration of planetary boundaries and what this means for the economy in Enabling the Transition, and the Environment Secretary told us that she did not see the environment posing limits on the amount of economic activity, but rather the type of activity:

It is not whether we grow; it is how we grow ... I genuinely think that the perception that somehow environmental and economic goals are incompatible is false ... What we need to do is to look for the win-wins whereby, with reduced environmental impact and a more sustainable use of resources, we can facilitate rates of sustainable growth. I don’t think it is either/or; it is both/and.

52. Many saw the Government’s current agenda as focusing too much on growth and too little on measures to protect the environment and ensure environmental limits are not breached. David Powell of Friends of the Earth believed that current government policies, including Enabling the Transition, were being presented as “growth first ... let’s try and make it green and anything else we can do is fantastic.” In our recent Report we called on the Government not to weaken the Carbon Budgets because of concerns over UK competitiveness with the rest of Europe. Such a move would risk making our statutory Climate Change targets unachievable. We also heard concerns that, without a definition of sustainable development being included within the new planning guidance, proposals to introduce a “presumption in favour of sustainable development” would lead to unsustainable development. RSPB believed greater thought should be given to whether the “continued push for growth is in fact in conflict with prosperity in the longer-term”. The Packaging Federation believed there was little sign that the Government understood a “real danger of a fundamental incompatibility between UK climate change goals and economic growth”. Green House believed that a strategy of export-led growth was incompatible with a green economy as “it relies on lengthy supply chains and hence an extensive use of energy and so contributes to climate change”.

53. The Economic Secretary told us that delivering growth in the economy was a “vital priority” for the Treasury:

We seek economic growth, and that is a vital priority for reasons that everyone is well aware of ... The fact is that we have to find ways of growing the economy, because that means jobs. Let’s not use jargon. We are talking about jobs for you, me,
our constituents, our mums and dads, and our children. We are talking about basic stuff. That is what economic growth means. Let’s be specific about that.\(^{188}\)

54. There was some support during our inquiry for a ‘steady-state’ economy, in place of economic growth.\(^{189}\) Green House believed that economic growth was only possible in the short-term as part of a transition strategy to move us towards an economy that is in a steady state. Such economic growth would be confined to replacing infrastructure to enable self-reliant economies stabilising the economy within our national resource limits.\(^{190}\) The Royal Society recently called for “collaboration between national governments to develop socio-economic systems and institutions that are not dependent on continued material consumption growth”.\(^{191}\) The concept of ‘decoupling’—reducing the amount of resources used to produce economic growth and de-linking economic development from environmental deterioration\(^{192}\)—is seen by some as a way of allowing continual growth in a world of finite resources. Decoupling would require significant changes in government policies, corporate behaviour and consumption patterns by the public,\(^{193}\) which WWF believed would represent a “huge political challenge”.\(^{194}\) In *Prosperity without growth* in 2009, Professor Tim Jackson distinguished between ‘relative’ and ‘absolute’ decoupling, noting that while the latter was “essential if economic activity is to remain within ecological limits” it was difficult to demonstrate.\(^{195}\) WWF argued that there was “scant evidence” of absolute decoupling.\(^{196}\) Tim Jackson’s report concluded that “there is as yet no credible, socially just, ecologically sustainable scenario of continually growing incomes for a world of nine billion people”.\(^{197}\) Similarly, Green House told us that because of the “unfeasible nature of the increased efficiencies required and the nature of rebound effects\(^{198}\)” associated with technological improvements, seeking to decouple economic growth and production from CO\(_2\) emissions “is an example of psychological denial” and called for a structural change in the economy.\(^{199}\)

55. Research by Defra\(^{200}\) indicated that there had been no decoupling of ‘non-construction’ materials consumption from increases in Gross Domestic Product, but that there were

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\(^{188}\) Qq 229, 241

\(^{189}\) Qv 65

\(^{190}\) Qv 65

\(^{191}\) The Royal Society, *People and the Planet*, April 2012.


\(^{193}\) Ibid.

\(^{194}\) Qv 70

\(^{195}\) Professor Tim Jackson and Sustainable Development Commission, *Prosperity without growth?—The transition to a sustainable economy*, March 2009.

\(^{196}\) Qv 70

\(^{197}\) Professor Tim Jackson and Sustainable Development Commission, *Prosperity without growth?—the transition to a sustainable economy*, March 2009.

\(^{198}\) The beneficial effects of new technologies are ‘taken back’ as a result of changed consumer behaviour. For example, the adoption of energy efficiency measures may result in increased energy use as consumers are less worried about switching appliances off.

\(^{199}\) Qv 65

\(^{200}\) The UK Environmental Accounts include a measure of the mass of material extracted from the UK environment (plus the mass of imports less the mass of exports)—reported as Domestic Material Consumption (DMC). Statisticians at
signs of construction materials decoupling to “some extent”. International Synergies believed that ‘industrial symbiosis’ networks of organisations were delivering decoupling whilst providing a return on investment. The Environment Secretary identified resource efficiency as a “theme of its time” and one of the UK’s strongest contributions to global efforts on the green economy. The Roadmap to a resource-efficient Europe, aims at decoupling economic growth from the use of resources.

56. Absolute ‘decoupling’ of resource consumption and economic growth, even if possible, would require major economic, technological and social changes that together would constitute a huge political challenge. The Government should set up a unit to examine the relationship between growth, prosperity and quality of life to understand how best to generate economic activity and jobs, while at the same time promoting sustainability and living within environmental limits. The Government also needs to quantify those environmental limits that are most likely to be affected by economic activity in the UK, and to build those limits into a green economy strategy.

57. It has been estimated that over 75% of UK emissions are influenced directly or indirectly by consumers. Tim Jackson believed that a “new macro-economics for sustainability” was required to help tackle consumerism in order to achieve deep cuts in natural resource use and emissions. The Sustainable Consumption Institute identified barriers preventing consumers from making more sustainable choices, including price, information, a sense of hopelessness, and the need to change the social context. The UN’s High Level Panel on Global Sustainability concluded that “access to information through reliable labelling is critical for making educated, sustainable choices”. Some producers and retailers were making changes to their product ranges and providing more information; for example John Lewis had developed a product label to identify products with a lower environmental impact. However, there was little evidence that environmental concerns were influencing purchasing decisions more generally, and

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Defra are developing a new measure to supplement this that takes into account the raw materials that are used to produce goods that are imported, not just the mass of those final goods. Once developed, this measure to be known as Raw Material Equivalents and will be published regularly as part of the UK Environmental Accounts.

202 Ev w40. Other reported impacts were: reduced industry’s demand for virgin materials by 53 million tonnes, cut water use by industry by 65 million tonnes, recovered and reused 2.4 tonnes of hazardous waste, cut costs by £860 million, and created and safeguard 8,770 jobs. Between April 2005 and March 2011. Figures include a five year persistence.
203 Q 222
204 European Commission, Roadmap to a Resource Efficient Europe, September 2011.
205 Sustainable Consumption Institute, Consumers, business and climate change, 2009.
206 Professor Tim Jackson and Sustainable Development Commission, Prosperity without growth?—the transition to a sustainable economy, March 2009; Q 13
207 Sustainable Consumption Institute, Consumers, business and climate change, 2009.
208 UN Secretary-General’s High-level Panel on Global Sustainability, Resilient people, resilient planet: A future worth choosing, Overview, 2012, p. 38.
209 Ev w32
210 Ev w44
211 Ev w8
while green purchasing was important to many, “it is not the deciding factor in their decision-making, and is at best a tie-breaker, all else being equal”.212

58. Public Interest Research Centre advocated a more direct approach under which retailers would ‘choice-edit’ the product lines they offered, particularly on the basis of carbon footprint scores.213 We explored this approach in our Sustainable Food inquiry.214 The UN High Level Panel on Sustainability recommended sustainable product standards and that price incentives and disincentives be applied to help make sustainable choices more easily available.215 Green House believed much of the current demand for products is driven by the advertising industry and called for Ofcom to be given a role in limiting the use of advertising to create desire for goods and services.216

59. Greater engagement with consumers on both the priority that should be given to importance of sustainability and their role in the transition to a green economy was needed.217 The Government told us that the “transition to a green economy will depend on the development of, and demand for, greener goods and services ... Consumer demand will therefore need to adapt and shift towards products and services that are greener, more efficient and competitively priced”.218 Andrew Raingold from the Aldersgate Group pointed out, however, that the role of the individual was completely missing from Enabling the Transition.219 Neither does it set out whether the Government would have a role in helping to change patterns of consumer demand, which the Living with Environmental Change Programme regarded as a significant omission.220

60. Instead, the Government expects that businesses might increasingly be held to account by their customers for the impact they had on the environment.221 It would be up to the companies concerned to reflect consumer demands by taking account of the environmental impact of their products, services and business practices, and the practices of those with whom they do business. To help this, the Government would facilitate the provision of open-source data on supply chains.222 Tim Jackson believed that putting a requirement on business to disclose environmental impacts would encourage businesses to make decisions that would affect that disclosure, and thereby change business practice.223 The Packaging Federation believed that the Government’s approach of requiring business to change their practices to tackle the carbon consequences of unrestrained consumer demand would put UK business at a “very substantial disadvantage to its international

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212 Ev w54
213 Ev w36
215 UN Secretary-General’s High-level Panel on Global Sustainability, Resilient people, resilient planet: A future worth choosing, Overview, 2012, p. 39.
216 Ev 65
217 Ev w32
218 Ev 109
219 Q 29
220 Ev w85
221 Ev 109
222 Ibid.
223 Q 12
competitors” and push manufacturing abroad: Industry did not have “infinite capacity” to compensate for the carbon resulting from demand for the goods and services it produced.224

61. There are already plans for sustainability reporting by Government departments for 2011–12 onwards, which will include an overall commentary on performance and forward plans, and analysis of greenhouse gas emissions and associated energy use, waste minimisation and management, and water and other finite resource consumption. Commentary on progress against any biodiversity action plans and in achieving more sustainable procurement methods will also be included.225 But in March 2012 (the deadline set by the Climate Change Act 2008226) the Government deferred its decision on whether it would introduce mandatory reporting for the private sector.227 This is despite the Environment Secretary supporting the adoption of sustainability reporting in an international context. In a speech setting out the UK Government’s aims for the Rio+20 Summit on 9 February 2012, she stated “... we will join the call for Rio to drive uptake of sustainable business practices—in particular transparent and coherent sustainability reporting”.228 The Rio+20 Zero Draft calls for “a global policy framework requiring all listed and large private companies to consider sustainability issues and to integrate sustainability information within the reporting cycle.”229 In Budget 2012, the Government announced the reform or replacement of the Carbon Reduction Commitment, which currently requires particular businesses to report their emissions. The Economic Secretary was not prepared to tell us whether she, or the Treasury, would support mandatory emissions reporting, or whether if the CRC were scrapped its replacement would retain a reporting requirement.230

62. The Government’s approach to directing consumer demand to more sustainable choices relies on businesses providing better information, but it has deferred a decision on whether to make emissions reporting mandatory for the private sector. The Government must introduce such mandatory reporting urgently. It should also develop, with stakeholders and committed businesses, minimum sustainability standards which could attract wide acceptance.

224 Ev w8
225 See Treasury website: http://www.hm-treasury.gov.uk/frem_sustainability.htm
226 Section 85 of the Climate Change Act 2008 requires the Secretary of State to make regulations requiring directors’ report of a company to include information on emissions of greenhouse gasses or to explain why no such regulations have been made by 6 April 2012.
229 UN, The future we want, January 2012.
Delivering the investment needed to transition to a green economy

Providing certainty

63. As we noted in our Report on the Green Investment Bank, there are various estimates of the amount of investment needed in the UK to meet emissions reduction and renewable energy targets, ranging from £200 billion to £1 trillion. Traditional sources of finance are expected to provide £50 to £80 billion up to 2025, leaving a funding gap running into hundreds of billions of pounds.\(^{231}\) And in the UK investment in the green economy is growing less quickly than in other countries.\(^{232}\) The Pew Charitable Trusts found that in 2011 the UK was seventh in the world for investment in green energy (total investment of $9.4 billion, accounting for 4.2% of investment in the G-20), up from 13\(^{th}\) in 2010.\(^{233}\)

64. Given the existing spare capacity in the economy and the stock of investment funds available, the issue has been one of “a lack of confidence to invest rather than a lack of liquidity”.\(^{234}\) The Aldersgate Group believed that the most effective policies would provide the most certainty as possible by being:

- Credible — legal, enforceable, fully deliverable and supported by an overarching vision.
- Consistent — providing confidence that a policy direction will be maintained, implementing progressive, and avoiding retrospective, changes.
- Bankable — risk and reward levels are attractive over clear investment timeframes, with no shocks to damage early investors.\(^{235}\)

RenewableUK believed that without such policy certainty, “investors will assign higher risk premiums to investments in the green economy, making the transition more expensive and difficult”.\(^{236}\)

65. Enabling the Transition however, lacks the policy detail necessary to create a platform for investor confidence\(^{237}\) Instead it placed its emphasis on the Carbon Plan, published in December 2011.\(^{238}\) Frank Price from Grontmij told us that “the main audience [of Enabling the Transition] is the key investors who are going to drive our green economy, and we do not have a list of those people and we are not targeting them”.\(^{239}\) He contrasted the certainty surrounding the Auto-Oil Programme with the uncertainty surrounding carbon policies:

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\(^{232}\) Renewables investment in the UK grew by 11.7% over the period 2006-11 compared to growth of 89% in Italy, 37% in China, 23% in India, and 20% in Germany. [Pew Charitable Trusts, Who’s winning the clean energy race?, 2012 edition].


\(^{234}\) Grantham Research Institute on Climate Change and the Environment (Mattia Romani, Nicholas Stern and Dimitri Zenghelis), Policy Paper: The basic economics of low-carbon growth in the UK, June 2011.

\(^{235}\) Ev 93

\(^{236}\) Ev 81

\(^{237}\) Ev 103


\(^{239}\) Q 46
Back in the mid-1980s, early 1990s, we knew what the standards would be in 2011 in terms of auto emissions, and that long term clarity in the regulatory programme gave industry the ability to invest in a programme in a timely way. Compare that to what is happening with Carbon Reduction Commitment and other aspects of current policy around carbon management in the workplace and within industry and the two are poles apart. One where we have regulatory certainty, which led to investment and delivery through effective-based standards and regulation, and one where we have cut and change and cut and thrust.240

66. The Grantham Research Institute suggested that the Government should shoulder some of the policy and regulatory risk by being prepared to enter into ‘pre-commitments’ with “financial or reputational penalties for back-sliding” on policies.241 It suggested that the Committee on Climate Change, independently of Government, should be asked to set policy instruments such as the new carbon price floor, carbon-related tariffs and charges such as the Climate Change Levy and Carbon Reduction Commitment.242 Under such a system, “it would be more difficult to confuse the goals of these instruments with other political objectives ... [and] policy trade-offs”.243

67. James Meadway of the New Economics Foundation wanted the Government to have policies in place for when financial markets recover, that would facilitate and support investment in the green economy, not in high-carbon areas. He told us that:

private investment ... is likely to go for the easiest options first ... the low-hanging fruit ... The Government has to start to use its own resources to lay out a new path, to support the growth of investment in green industries and use its resources in order to make that happen.244

Professor Tim Jackson favoured structural change, telling us that setting up the Green Investment Bank would not be sufficient on its own “in an economy in which the other incentives are driving in a different direction. There is ... a demand for an economic literacy ... for an economy that works in a different way, where investment is channelled into transition...”.245 There were also calls for the Government to take a more active role in the management of the part-publicly owned banks, to help channel investment into the green economy.246

68. Budget 2012 announced a package of measures to support North Sea oil and gas but very little support for the green economy. The Chancellor told the House in his Budget Statement:

240 Q 36
241 Ev 76
242 Ibid.
243 Q 87 [Dr Alex Bowen]
244 Q 3
245 Ibid.
Gas is cheap, has much less carbon than coal and will be the largest single source of electricity in the coming years, so the Energy Secretary will set out our new gas generation strategy in the autumn to secure investment. I want to ensure that we extract the greatest possible amount of oil and gas from our reserves in the North sea. We are today introducing a major package of tax changes to achieve this. We will end the uncertainty over decommissioning tax relief... by entering into a contractual approach. We are also introducing new allowances, including a £3 billion new field allowance for large and deep fields to open up West of Shetland, the last area of the basin left to be developed—a huge boost for investment in the North sea.247

A call for evidence on barriers to investment in gas generation was also launched in advance of the Government publishing a new gas strategy in the autumn to ensure that investment in this sector comes forward.248 The Treasury assessed that as emissions were “driven by usage, not extraction”, the package of measures announced would not increase emissions, and the impact assessment for the measures did not quantify the emissions involved.249 Furthermore, the Economic Secretary saw the additional extraction from the North Sea as “very good for the British economy”.250 The country, she told us, could not meet its “environmental aspirations if the [Government did] not have regard to our economy at the same time”, and “if people are significantly struggling under debt, ... they may well struggle with the notion of spending more ... in an environmental way”.251 Budget 2012 was mainly a “consolidation” of previously announced plans.252 We are disappointed that no new incentives to support the green economy were announced in Budget 2012. In future Budgets, there should be greater consideration given to support for the green economy.

69. The Government should delegate to an independent body, perhaps the Committee on Climate Change, a role in setting tariffs and charges aimed at reducing emissions, as a way of reducing political risk (and thereby uncertainty) for investors.

Aligning financial markets with the green economy

70. The financial services sector is an important part of the UK economy, accounting for 12% of GDP and employing over 1 million people.253 Around one third of the market value of the FTSE 100 Index covers oil, gas and mining companies.254 The Carbon Tracker Initiative calculated that the carbon dioxide potential of coal, oil and gas reserves held by London listed companies (105 GtC02) was equivalent to ten times the UK’s carbon budget

247 HC Deb, 21 March 2012, Col 798.
249 Uncorrected transcript of oral evidence taken before the Environmental Audit Committee on 25 April 2012, HC 1931 (2010–12), Qd 64-68.
250 Uncorrected transcript of oral evidence taken before the Environmental Audit Committee on 25 April 2012, HC 1931 (2010–12), Q 56.
253 Ev w5
254 Ibid.
up to 2050 (9.5–10.5 GtCO₂), although such companies’ output would have a global rather than purely UK market. It believed that a failure to align financial markets with the UK’s emissions reduction trajectory exposed those markets to a potential ‘carbon bubble’; there was no limit on investments in fossil fuel assets in spite of statutory UK targets to limit the emissions that would result from such investments. By “looking at individual companies [on their own] it is not clear [whether together they] have more reserves than we can afford to burn. It is only when someone adds it all up and takes a market view that it becomes obvious that the numbers do not add up”. It called for greater disclosure by companies of such potential future carbon dioxide emissions and for financial regulators to assess the level of financial risk involved. In February 2012, a group of 20 investors, NGOs and academics urged the Governor of the Bank of England to investigate this issue. The Governor noted that there could be such a risk if the impact of policies aimed at reducing returns in high carbon areas were not already being priced into the market.

71. There is very limited discussion in Enabling the Transition of whether how financial markets currently function create any barriers to investment in the green economy. Given that a significant redirection of investment will be needed to deliver the green economy, this was a significant omission. WWF believed the transition to a green economy would be capital-intensive, with high up-front costs for renewable energy and energy efficiency paying dividends over the longer term, and that this presented a fundamental challenge for both markets and governments. The Green Investment Bank, through UK Green Investments (UKGI), began making investments in April 2012 in the priority areas of offshore wind energy, waste and non-domestic energy efficiency. UKGI will also support the Green Deal. The Carbon Tracker Initiative criticised the short-term nature of incentive structures for rewarding companies and fund managers, along with an ability to “switch out of equity” at any time, both of which favoured investment in fossil fuels. WWF advocated new incentives for investment in natural capital, and reform of financial markets and corporate governance, to promote sustainable investment and longer-term thinking in business, as well as a “financial transaction tax to reduce speculative activity and generate funds to invest in minimising environmental and social risks”.

255 Ev w5; Carbon Tracker Initiative, Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble?, July 2011, p. 15.
256 Ev w5
257 Ibid.
259 Letter published on Climate Change Capital’s website, accessed 1 February 2012.
260 Ev w5
261 Ev 70
262 Ibid.
263 Until State Aid approval is secured for the Green Investment Bank, a new team within BIS will make investments on behalf of the Bank from April 2012. Called UK Green Investments, the team will be able to draw on £775 million of funding in 2012–13.
264 HC Deb, 12 December 2011, Col 61WS.
265 Ev w5
266 Ev 70
72. There was no discussion in *Enabling the Transition* of the role that UK financial markets could play in helping to finance the green economy. The Green Investment Bank will be an important test of how effectively the financial market can support green investment. To expand the scale of investment, however, the economics need to change fundamentally, and that requires the costs of ecosystems being embedded in business activity, as we discuss below.

**Reflecting the full environmental ‘costs’ in investment decisions**

73. *Enabling the Transition* stated that “transport and energy are engines for economic growth, powering our work and connecting businesses to their markets”, but also that water, waste and flood management systems will need to be reformed to be resilient to the impacts of climate change. It omitted discussion of ‘green infrastructure’—open spaces, woodlands rivers, etc—which as the *Natural Environment White Paper* tells us will play an increasingly important role in helping “to drive economic growth and regeneration and improve public health, well-being and quality of life ... and help reduce the negative impacts of climate change.”

74. At present, the full environmental ‘costs’ of activities are not factored into investment decisions. There is a still evolving policy framework for influencing carbon prices, but the Aldersgate Group believed that “we have only started to scratch the surface in terms of accurately pricing other resources”. The UN’s Economics of Ecosystems and Biodiversity study found that, in a global context, a failure to account for the value that natural services provide had led to decisions that degrade the natural environment and that “destruction of nature has now reached levels where serious social and economic costs are being felt”. In the UK, the Government’s June 2011 *National Ecosystem Assessment* found that nature was worth billions of pounds to the UK economy and that ecosystems were consistently undervalued in conventional economic analyses and decision-making. In March 2012 the Secretary of State set out the next stage of the assessment (see below). WWF cautioned that internalising ‘environmental externalities’ may lead to rising food and fuel costs, although it noted that in the longer-term costs would be higher if no action were

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268 The Natural Environment White Paper describes ‘green’ infrastructure as “living network of green spaces, water and other environmental features in both urban and rural areas. It is often used in an urban context to cover benefits provided by trees, parks, gardens, road verges, allotments, cemeteries, woodlands, rivers and wetlands ... and in a rural context ... it might refer to the use of farmland, woodland, wetlands or other natural features to provide services such as flood protection, carbon storage or water purification.” [HM Government, *Natural Environment White Paper*, CM 8082, June 2011, p. 31].


taken.274 It is not clear how this agenda will be progressed at the Rio+20 Summit because at present the UN’s ‘zero draft’ seeks no commitments in this area.275

75. The *Natural Environment White Paper* committed the Government to enhancing the guidance on assessing the value of natural capital in decision-making by late 2011.276 The November 2011 *National Infrastructure Plan* was the first test of how well this guidance has been embedded. It announced a commitment to invest over £1 billion to tackle areas of congestion and improve the national road network. Defra’s Andrew Lawrence told us that the road building programme was considered to constitute “green growth” as “part of the overall growth review looking across the piece”;277 decarbonisation of transport was a key aspect of the Government’s *Carbon Plan* and that “we will need road transport as one of the elements of the transport mix going forward”.278 The Secretary of State saw the road building programme as compatible with a green economy because:

> One cannot simply say, “We don’t need to invest in the roads.” We know there is terrible congestion at particular pinch points, and where there is congestion, it has an impact on air quality. Again, if we are to marry up our concerns for people’s well-being, their health and the sustainability of the economy, of course we have to invest in the infrastructure to make sure that we get a win-win out of that.279

The *National Infrastructure Plan* also set out the capacity constraints facing the UK’s aviation sector. The Government wanted to look at options for addressing that and, worryingly, given that the sector is one of the most difficult to decarbonise, limiting aviation appears not to be an option.280 We are frustrated that, again, there appears to be little thought being given to the longer-term implications for the environment, and keeping within environmental limits, of policies to stimulate economic growth.

76. The Government aims to ensure that the value of nature is better reflected in policy-making by putting a monetary value on natural capital. A new Natural Capital Committee will report to the Economic Affairs Cabinet Committee on: when, where and how natural assets are being used unsustainably; how Government should prioritise action to protect and improve natural capital; and research priorities to improve future advice and decisions on protecting and enhancing natural capital.281 The value of natural capital will also be captured in the National Accounts to “provide a useful tool for understanding the interaction between the economy and the environment”282 ending the situation “where

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274 Ev 70
275 “We welcome the Nagoya Protocol adopted at the tenth meeting of the Conference of the Parties to the Convention on Biodiversity. We support mainstreaming of biodiversity and ecosystem services in policies and decision-making processes at international, regional and national levels, and encourage investments in natural capital through appropriate incentives and policies, which support a sustainable and equitable use of biological diversity and ecosystems”. [UN, *The future we want*, January 2012, paragraph 91].
277 Qq 170-177
278 Q 178
279 Q 247
280 Qq 179-182
282 Ev 109
gains and losses in the value of natural capital go unrecorded and unnoticed”. 283 A roadmap for further improvements up to 2020 would be published. 284 In March 2012 the Environment Secretary announced that the economic analyses needed would be developed, along with tools for policy makers to incorporate the value of local natural capital in decision-making. 285 The Government would also provide advice and guidance to business on how they can measure their impacts on natural capital. 286 Tim Jackson believed that it was not enough to simply compute a value for the natural environment, but that such values must be ‘internalised’ in decision-making processes. 287 Jules Peck told us, however, that that required a degree of compulsion:

Businesses are beasts of the market and most [environmental] goods and services are not of the market, they are public goods. Unless Government steps in and somehow makes these become part of the market or regulates to protect them from the market, the market is blind to them. 288

77. There are a number of ways that environmental costs can be incorporated. In our Budget 2011 and Environmental Taxes Report we highlighted how taxation could have an important role in internalising the side-effects of production and consumption on the environment, to create an incentive to move away from environmentally damaging behaviour. 289 But without an appreciation of the value of such damaging behaviour, environmental taxes will remain a relatively crude policy instrument which cannot be fine-tuned to reflect the costs involved.

78. The Government should instruct the Green Economy Council to advise formally the Treasury, Defra and BIS on how green infrastructure can be enhanced, building on the recommendations of the Ecosystem Markets Task Force, and to publish that advice.

79. The Government wants the value of nature to be reflected in policy-making, and it has work underway to take this forward. For the private sector, however, the Government plans only to provide advice and guidance to business on how they can measure their impacts on natural capital. Also, the Government should, with like-minded businesses, trial the application of that guidance and to explore what further research is needed.

**Fiscal measures**

80. There are already some fiscal incentives to help the transition to a green economy, including a £5,000 subsidy on the purchase of low-carbon cars, £200 million earmarked to encourage take-up of the Green Deal, and feed-in tariffs for renewable energy generation. Our recent joint Report with the Energy and Climate Change Committee on solar power

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284 Ibid., p. 36.
287 Q 11
288 Q 12
feed-in tariffs illustrated that the Government’s use of feed-in tariffs as a fiscal incentive was poorly handled.\textsuperscript{290} Taking on board lessons from that experience, on 26 March 2012 the Government pushed back the start of the domestic phase of the Renewable Heat Incentive to Summer 2013.\textsuperscript{291}

81. Environmental taxes can facilitate a switch to more sustainable behaviours. The European Commission set out to encourage “greater use of environmental taxes in shifting taxation away from labour” to exploit the job creation potential from the green economy, estimating that 1.5 million jobs could be created in the EU from shifting taxes towards emissions and energy.\textsuperscript{292} In our Report on Budget 2011 and environmental taxes, we concluded that there was a pressing need for Government to take a more coherent and clearly articulated approach to environmental taxes. We recommended that the Government set out its detailed plans for increasing the proportion of environmental taxes as part of an environmental tax strategy, along with a clear rationale for how these taxes were defined. It was clear that the Government was moving away from the international definition of an environmental tax, and that by excluding particular taxes the Government would have no incentive to increase them. To increase transparency we recommended that the Government publish data on the proportion of environmental taxes against both the Office for National Statistics’s and Government’s lists of environmental taxes. The Government Response did not address the need for, and content of, an environmental taxation strategy or how environmental taxes should be defined.\textsuperscript{293}

82. \textit{Enabling the Transition} noted only the Government’s desire to increase the proportion of tax revenue accounted for by environmental taxes.\textsuperscript{294} Budget 2012 made no further announcements in this area, bar announcing plans to simplify the Carbon Reduction Commitment to reduce administrative burdens on business, or if that does not prove possible, to replace it with a new environmental tax.\textsuperscript{295} The Economic Secretary told us in April 2012 that the Government remained committed to increasing the proportion of environmental taxes.\textsuperscript{296} She told us that work was still “proceeding” on a definition of environmental taxes.\textsuperscript{297} In the meantime, the Economic Secretary made it clear that the Treasury had not taken forward our previous recommendation for the Government to publish data on the proportion of environmental taxes against both the ONS’s and Government’s lists of environmental taxes.\textsuperscript{298} Nearly two years since making the

\textsuperscript{290} Environmental Audit Committee, Tenth Report of Session 2010–12, Solar Power Feed-in Tariffs, HC 1605.


\textsuperscript{292} European Commission, Towards a job-rich recovery, April 2012; European Commission, Commission staff working document: Exploiting the employment potential of green growth, April 2012.

\textsuperscript{293} Environmental Audit Committee, Sixth Special Report of Session 2010–12, Budget 2011 and Environmental Taxes: Government Response to the Committee’s Sixth Report of Session 2010–12, HC 1527.

\textsuperscript{294} HM Government, Enabling the Transition to a Green Economy: Government and business working together, August 2011, p. 9.


\textsuperscript{296} Uncorrected transcript of oral evidence taken before the Environmental Audit Committee on 25 April 2012, HC 1931 (2010–12), Q 47.

\textsuperscript{297} Uncorrected transcript of oral evidence taken before the Environmental Audit Committee on 25 April 2012, HC 1931 (2010–12), Q 29.

\textsuperscript{298} Uncorrected transcript of oral evidence taken before the Environmental Audit Committee on 25 April 2012, HC 1931 (2010–12), Q 51.
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commitment to increase the proportion of tax revenues accounted for by environmental taxes, the Government still has no strategy for achieving this commitment. It has not published its definition of an environmental tax, and it is unacceptable that nine months after our Report on Budget 2011 was published we are still waiting for the Government to respond to our recommendations in this area. In its response to this Report, the Government must set a date by which it will publish its definition of an ‘environmental tax’.

83. As we noted above, the Government has established a Natural Capital Committee to advise the Government on the state of English natural capital and plans to include natural capital in the National Accounts (paragraph 76). We questioned the Economic Secretary as to whether there was a role for a body, such as the Office for National Statistics or Office for Budget Responsibility, to scrutinise such data in the National Accounts to assess whether sustainable development was being delivered through economic policy, and she emphasised the limits of their existing remits.299

84. The Government should set out its ambition for how data on natural capital in the National Accounts will be used (paragraph 76). It should develop targets for improving the state of the environment, similar to the ‘fiscal mandate’ for the public finances, and establish transparent reporting against such targets. The Natural Capital Committee’s work on a ‘natural asset stock check’ should be one of the basket of indicators used to measure the green economy.

85. An independent body is needed to examine the linkages between the state of natural capital and economic policy, and to provide advice on whether growth in the economy is being achieved at the expense of stocks of natural capital. That body could be an Office for Budget Responsibility with an extended mandate, or the Natural Capital Committee with an obligation to report publicly rather than to the Government.

Regulation

86. Considerable influence is exercised on economic and market performance by regulation.300 Regulatory frameworks also “have the potential to drive green innovation, where the development of new practices and technologies is essential”.301 The Government’s policy, however, is to only use regulation where “there are no better alternatives”.302 It believed that whilst regulation “has been, and will remain, an important tool in managing environmental risks and impacts”, a voluntary approach is “less burdensome than regulation, and, developed intelligently, can achieve positive outcomes freeing businesses and society from unnecessary obligations, improving competitiveness and allowing people to take greater responsibility for their own lives”.303 Adrian Wilkes from the Environmental Industries Commission told us that in discussions on earlier

299 Q 244
300 Ev w85
301 Ibid.
302 Ev 109, Q 233 [Environment Secretary]
303 Ev 109
drafts of *Enabling the Transition*, “regulation was perceived as a dirty word”. The Environment Secretary told us that voluntary codes could have a potentially big impact, citing as an example the Courtauld Commitment which had reduced packaging and increased the amount of recycling. She saw a willingness on the part of business to reduce waste and increase resource efficiency “because it makes perfect economic and environmental sense—who wants to waste money at times like this?”

87. The Government’s approach was generally favoured by business. The British Retail Consortium wanted a balance between enabling voluntary initiatives and market-based approaches on the one hand, and introducing regulation and legislation on the other. Intervening too strongly with regulations could inhibit innovation. It believed that “competition can be a good thing and Government should not always seek to legislate, when often the market can make changes more deeply and more quickly”. Increasing regulations in the UK without similar action in other countries risked creating leakage of jobs and putting companies at an uncompetitive disadvantage. Research Councils UK believed that what made regulations work was still not satisfactorily understood, and called for “‘smart’, evidence-based and proportionate regulation” of the green economy that did not unduly block or constrain technological development.

88. Others, however, cautioned that relying on a voluntary approach would not ensure a timely transition to a green economy. Andrew Raingold of the Aldersgate Group told us that regulation was “absolutely key” to delivering a green economy. Adrian Wilkes of the Environmental Industries Commission told us that:

if you want to achieve any environmental improvement you have to regulate ... Our members, from their own commercial experience ... say that [voluntary agreements] do not usually work. What has achieved environmental quality improvements over the last 20 or 30 years in this country, and in Europe and America and Japan, is regulation and its effective enforcement.

Agri-Energy wanted to see stronger regulations, specifically in the form of a ban on food waste going to land-fill, as the current regime was not providing strong enough disincentives. A ban would help increase renewable energy produced from anaerobic digestion by providing a reliable food waste supply chain.
89. The Coalition Agreement set out a number of reforms aimed at improving the regulatory framework to boost ‘enterprise’ and ‘growth’—a ‘one-in, one-out’ rule for introducing new regulations, sunset clauses on regulations, ensuring the need for each regulation is regularly reviewed, and giving the public the opportunity to challenge the worst regulations. The Cabinet Office launched a ‘Red-Tape Challenge’ to review the 21,000 regulations active in the UK today, and the environment was one of the first ‘themes’ for consideration. Last year’s Autumn Statement launched a Defra-led review of the European Habitats and Wild Birds Directives.

90. Andrew Raingold believed it was a mistake to put the whole of Defra’s and DECC’s regulations into the Red-Tape Challenge, because it created a “very big backlash almost straight away”, but he also saw that there were “real opportunities for simplifying and possibly reducing bureaucracy, and increasing outcomes”. The Environment Secretary explained that:

    the objective of that exercise is to make sure that you protect the purpose for which the regulation was put in place, but you relieve the regulation when it is a duplication or there is any gold-plating, to relieve the burden on business.

There is absolutely no suggestion that environmental protection will be compromised by a review of the regulation for it ... When the Government came into office, they systematically gave an undertaking to try to achieve better regulation. It is not that we think regulation is bad or that it is good; it is neither. But bad regulation is bad, and that’s for sure. What we want is better regulation ... There is no question of resciling from the [Habitats and Wild Birds] Directives.

91. In March 2012 the Government published the results of both the environmental theme of the Red-Tape Challenge review and the Habitats and Wild Birds Directives Implementation review. Of 255 regulations considered by the environmental theme of the Red-Tape Challenge, 132 would be “improved”, mainly by simplification or merger, 70 would be kept as they were and 53 “obsolete” regulations would be repealed. The Government estimates that these changes will save businesses £200 million a year. The Government also announced that “work [will start] immediately with businesses and environment organisations to identify the scope for significant rationalisation of guidance, and will report to Ministers by September with the aim of an announcement in the autumn...”. The Habitats and Wild Birds Directives Implementation review, launched by the Chancellor to “... make sure that the gold-plating of EU rules on things such as habitats...”.
do not place ridiculous costs on British businesses”, found that in the large majority of cases the implementation of the Directives was working well. The Government would improve the Directive’s implementation in four areas—facilitating nationally significant infrastructure projects; improving implementation processes and streamlining guidance; improving the quality, quantity and sharing of data; and improving the customer experience.

92. Regulations have an important role in protecting the environment. The impending consolidation of environmental regulations must not be a smokescreen for lowering the protections they afford in a short-term pursuit of growth. The Government should consult and engage fully not just with business but also with environmental stakeholders.

**Innovation and skills**

93. The Grantham Research Institute believed the “history of previous industrial revolutions indicates clearly that learning and innovation can boost economic growth”. It saw “grave dangers” to growth from “indecision and procrastination, not simply by falling behind in technology, but also by being shut out of future markets”. Policies were needed to spur innovation, but “top-down attempts to identify where comparative advantage will lie in international trade in the global green economy run the risk of picking losers”. That risk has always been at the heart of the debate about whether Government or business should take the lead in identifying green skills requirements.

94. Our predecessor Committee in its 2009 report on Green Jobs and Skills found that relying exclusively on the market to address skills gaps was causing delays in greening the economy. The ‘demand-led’ approach to skills adopted by the then Government had not worked because employers were unable to articulate their needs effectively to the skills delivery bodies. The current Government published *Skills for a green economy: Report on the evidence*, in October 2011, as a companion document to *Enabling the Transition*. It found that many employers continued to be unable to “clearly articulate their skills needs ... [and] there have been few attempts to look at the skills implications of the transition right across the economy”, and that “the Government’s demand-led skill system may continue to struggle to respond adequately”.

95. The Aldersgate Group emphasised to us the importance of skills in rapidly growing environmental markets (in science, technology, engineering and maths—‘STEM’) as well as those that will be required in all sectors and businesses such as project management and

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323 HC Deb, 29 November 2011, Col 808.
325 Ibid.
326 Grantham Research Institute on Climate Change and the Environment (Mattia Romani, Nicholas Stern and Dimitri Zenghelis), *Policy Paper: The basic economics of low-carbon growth in the UK*, June 2011.
327 Ibid.
328 Ev 76
330 Ibid.
communication skills. But skills gaps in those areas were acting as a barrier to the green economy. Scottish Renewables calculated that the current output of STEM graduates and technicians “was insufficient to even meet the need to fill vacancies that come about through retirement, let alone to simultaneously help drive the rise of new innovative industries which will create a green economy for the UK”. RenewableUK similarly believed that the supply of new ‘STEM’ skills would be insufficient to meet the needs of the wind, wave and tidal energy sectors, which it expected could create 88,000 jobs by 2021. The Institute of Ecology and Environmental Management highlighted similar concerns. The Government has announced a number of measures designed to help employers more effectively articulate their needs, including:

- a new ‘skills for a green economy’ grouping of Sector Skills Councils to help businesses understand changing skills requirements.
- improving the quality of information, advice and guidance available on careers in a green economy through the new National Careers Service.
- a renewables training network, with 2,000 places on training courses specifically tailored to those wanting to make the move into the renewable energy sector.
- a STEMNET system sending ‘STEM ambassadors’ into schools, and a ‘See Inside Manufacturing’ programme aimed at changing students’ views on manufacturing careers.

96. Some of our witnesses favoured the Government going further than this, however, by developing skills strategies specifically linked to environmental policies such as the Green Deal. Friends of the Earth pointed out that “the Government has said that it is aiming for 14 million homes to be improved under the Green Deal by 2020. That works out as over 4,000 homes every day ... However, the Government has only committed to funding 1,000 Green Deal apprenticeships”. There were also calls for a dedicated green skills strategy to set out where skills gaps existed and how these would be tackled, in particular focusing on STEM skills. The TUC highlighted a need for the Government to define a strategic role for itself on green skills, and suggested the creation of a stakeholder sub-committee to the

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331 Ev 93
333 Ev w63
334 Ev 81
335 Ev w68
337 Ibid.
338 Q 183 [Janice Munday]
339 Ibid.
340 Ev 81; Ev 84; Ev 93; Ev 103
341 Ev 84
342 Qq 20, 26 [Andrew Raingold]; Ev w85
Green Economy Council to consider skills matters. The Renewable Energy Association called for greater career entry paths into renewable energy for young people, unemployed people and those transferring from the traditional energy industries, into the “high-skills end” of the renewable energy industry to avoid a “demographic time bomb”.

97. Additional action is needed to ensure that there are adequate skills to support a green economy. The Government should produce a green skills strategy to ensure that skills and training provision can match the aspirations of green economy policies. There are difficult judgements to be made, however, about the extent to which Government rather than business should take the lead in identifying the required skills. Where Government can most help is in providing stable long-term policy framework on the green economy, which will provide the certainty that business needs to be able to make long-term investment in a skilled workforce.

Procurement

98. The Aldersgate Group believed one of the most direct ways that the Government could stimulate demand for more sustainable goods and services was by “exemplary action as the UK’s largest purchaser”. In 2009–10, Government procurement expenditure was £256 billion. In the March 2011 Plan for Growth, the Government committed to using its “public procurement power to help drive new markets in green products and services”. However, the Government has not yet set out how it intends to achieve this. In Enabling the Transition the Government commits only to buying “more sustainable and efficient products within the context of the overarching priorities of value for money and streamlining procurement processes” and the Government’s Greening Government Commitments only sets targets to reduce the impacts from public procurement.

99. The Aldersgate Group suggested that there needed to be a change in “mindset” away from setting minimum sustainability standards that lead to incremental change, towards “stimulating innovation in new goods and services [including] greater emphasis on environmental and social measures and making these the basis for competition amongst suppliers, alongside price and quality”. The TUC made a similar point. The recently passed Public Services (Social Value) Act 2012, which was a private Members’ Bill, is intended to “strengthen the social enterprise business sector and make the concept of ‘social value’ more relevant and important in the placement and provision of public services”. It requires certain public authorities to consider at the pre-procurement phase of procuring services how what is being procured might improve the economic, social and

343 Ev 118
345 Ev 93
346 HM Treasury and BIS, Plan for Growth, March 2011.
347 Ibid.
350 Ev 93
351 Ev 118
environmental well-being of an area and how the authority might secure that improvement in the procurement process itself.\textsuperscript{352}

100. In respect of Government procurement, the emphasis in \textit{Enabling the Transition} was on value for money and streamlining processes. In responding to this Report, we recommend that the Government go further and set out how it intends to use its procurement expenditure to help develop markets for green goods and services and how it intends to monitor progress in doing so. It should also set out what specific changes it intends to make to ensure that Government procurement meets the requirements of the Public Services (Social Value) Act.

\textsuperscript{352} Public Services (Social Value) Act 2012 (Explanatory Notes).
4 Monitoring progress towards a green economy

Measuring the green economy

101. As we discussed in our Report on the preparations for the Rio+20 Summit, the existing primary measure of the economy, Gross Domestic Product (GDP), is imperfect as it does not take into account changes to the environment, society and individuals’ well-being. GDP is focused on “activity, whether positive or negative in terms of well-being; it measures flows rather than stocks; it takes no account of equity; and its unit of measurement is in incidental monetary terms”. Following a 2009 report from the Commission for the Measurement of Economic Performance and Social Progress (the ‘Stiglitz Commission’), there is a growing awareness that we need to look beyond GDP to get a full picture of human progress, and consider how to measure national well-being and progress more widely. James Meadway of the New Economics Foundation told us that:

the desire to fixate on GDP is dwindling. Even the kind of minimal promises that rising GDP is supposed to offer—GDP goes up; this makes everyone richer—simply have not happened. … I think we can win support for a wider, broader measure of economic success. I think it has to happen if we are serious about a transition to a green economy.

102. In November 2010 the Prime Minister announced that the Office for National Statistics (ONS) would lead the development of well-being indicators to help guide Government policy. He said:

We will start measuring our progress as a country not just by how our economy is growing, but by how our lives are improving; not just by our standard of living, but by our quality of life ... We’ll continue to measure GDP as we’ve always done, but it is high time we admitted that, taken on its own, GDP is an incomplete way of measuring a country’s progress.

The ONS launched a ‘Measuring National Wellbeing Project’ to find out what matters most to people in their lives and what is important for measuring the nation’s well-being. It planned to launch a draft set of indicators in April 2012. If they subsume indicators of the state of the environment, as the Stiglitz Commission’s proposals did, then they could also serve to help measure progress towards a green economy.

353 Ev 65
355 Ev w94
356 Q 15
357 Prime Minister’s speech on wellbeing, 25 November 2010, available here: http://www.number10.gov.uk/news/pm-speech-on-well-being/
358 See Office for National Statistics’s website: http://www.ons.gov.uk/well-being
359 Ev w94
103. There were other potential models, however, including the OECD’s indicators for the green economy, the World Bank’s estimates of natural resource depletion and the UN Development Programme’s ‘Human development Index’.\footnote{Ev 76} WWF suggested that indicators would need to cover: ensuring mankind’s footprint is sustainable; maintaining and enhancing natural capital and ecosystem services; and improving well-being and social equity.\footnote{Ev 70} Green House suggested measuring “the health of our ecosystem and of other species through the efficiency of the planet’s carbon and nitrogen cycles; the health and diversity of animal and plant life; ... equality between people; ... and measures of material flows through the economy”.\footnote{Ev 65} The Aldersgate Group thought, however, that “the number of green jobs should not be a green economy indicator, as it is complex to define and the ambition is for all jobs to be green”.\footnote{Ev 93}

104. Defra, as the Government department responsible for embedding sustainable development, has published progress against Sustainable Development Indicators since 1992.\footnote{Ev 76} The Government has been reviewing these Indicators and intends soon to publish a draft set for public consultation.\footnote{Ev 109} In developing these Indicators, it has stated it will undertake to consider which “measures can provide the best picture of the impact of our production and consumption of goods and services—looking at consumption patterns and resource efficiency of business and individuals as well as the UK as a whole”.\footnote{Ev 93} These too might provide a basis for measuring progress towards a green economy.

105. There was, however, no reference in Enabling the Transition to tools or indicators for monitoring progress towards a green economy. The Government expected progress against various actions in Enabling the Transition to be monitored through the Carbon Plan,\footnote{Ev 109} but such a focus on emissions overlooks the wider impact on the environment. The Government also intended to benchmark the UK against other countries in terms of increased investment in low-carbon technologies\footnote{Ev 109}. WWF believed that it was:

meaningless to have indicators without targets: even if trends are going in the right direction, the rate and scale of change will determine whether or not key ecological thresholds and tipping points are reached. Indicators and targets must also guide core economic policy making from the outset rather than simply assessing retrospectively the cumulative impact of policies.\footnote{Ev 70}

106. To demonstrate its commitment to a transition to a green economy, the Government must set indicators and targets by which progress can be measured. These

\footnote{Ev 76}{See Defra’s website: http://sd.defra.gov.uk/2011/09/defra-invites-feedback-on-proposals-for-new-indicators/}
\footnote{Ev 70}{See Defra’s website: http://sd.defra.gov.uk/2011/09/defra-invites-feedback-on-proposals-for-new-indicators/}
\footnote{Ev 93}{HM Government, Enabling the Transition to a green economy: the Government and Business working together, August 2011, p. 5.}
\footnote{Ev 109}{Ev 109}
should capture the state of the environment, social fairness and well-being, not just the emissions reductions associated with the *Carbon Plan*. The Government should draw on the best aspects from the numerous measurement regimes already being developed internationally as well as within the UK that go beyond economic indicators such as GDP. Indicators should also include a measure of progress in ‘decoupling’ economic activity in the UK from our consumption of natural resources and emissions (paragraphs 54 and 55).

107. The Green Economy Council has a role in monitoring progress towards a green economy (paragraph 31). It should be tasked with reviewing and reporting on progress in developing indicators, and then with regularly reporting the results.

**Río+20**

108. In *Enabling the Transition* the Government made a commitment to:

> promote international action to develop a green economy, including through global agreements, EU strategies, and other initiatives, and working through the G20 and other forums to encourage green growth. The Government’s commercial diplomacy will maximise the export opportunities of the country’s green businesses.370

109. The green economy is one of two main themes of the UN ‘Río+20’ Conference Summit on Sustainable Development in June 2012. We have previously reported on the Government’s preparations for the Rio+20 Summit.371 Since our Report, the UN has published its ‘zero draft’ of the outcomes to be agreed at the Summit, building on submissions from national governments and others. The zero draft includes a commitment to develop ‘Sustainable Development Goals’, which could help define in global terms what a successful green economy might look like and enable progress to be monitored. After the Rio+20 Summit, the Government should examine the scope for subsuming agreed Sustainable Development Goals in the metrics that it should be developing to monitor progress with moving to a green economy (paragraph 106). Furthermore, the Government should return to the strategy set out in *Enabling the Transition* to consider whether any aspects of it conflict with any Sustainable Development Goals or other indicators agreed at the Summit.

110. More immediately, the Rio+20 agenda raises questions for the Government about its approach in *Enabling the Transition*:

- The Government’s submission to the zero draft was the same as its earlier memorandum to our inquiry, and largely ignored the social pillar of sustainable development from its analysis of the green economy in the UK, despite it being an important qualification in the Rio+20 agenda.

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The Rio+20 agenda includes eliminating ‘harmful’ subsidies as part of a transition to a green economy, but the Government has not set out any plans to do this in Enabling the Transition. Furthermore, the Government is still to set out how it will deliver on its commitment in the Coalition Agreement to transform the Export Credit Guarantee Department. In our 2011 Report on overseas aid we called on the Government to stop supporting fossil fuel projects and to develop and publish strategies for shifting its support to low carbon and green technologies. However, since then, it appears that further significant support has been provided to the oil industry. The Environment Secretary told us that the Government was willing to discuss at the Rio+20 Summit removing harmful subsidies but that it was mindful that this should not cut across the work done at the Durban Climate Change Conference.

International efforts to deliver a step-change in the transition to a green economy will be taken forward by the Rio+20 Summit, where world leaders will come together to set out a clear vision of the green economy and agree a framework for action. For the Government to be a credible voice at the Summit, it must ensure that it puts in place a strong domestic policy framework to drive the transition to a green economy in the UK. Given the criticisms of the Government’s approach domestically, there is a clear need to examine the Government’s role at the Rio+20 Summit, and its contribution and its commitments made. We plan to undertake such a review.

372 UNEP, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication—A Synthesis for Policy Makers, 2011; Ev 70


375 In November 2011, UK Export Finance guaranteed a US$1 billion line of credit to finance UK exports to Petrobras oil exploration and production facilities off the coast of Brazil. This compares with recent support for two green sector projects worth only £31 million. See: http://www.ukexportfinance.gov.uk/news-and-events/news/petrobras-line-of-credit-announced. UK Export Finance explained there was a low demand for green economy finance as the “majority of the UK’s renewables industry is either concentrating its efforts on the home market or exporting to developed economies. Very few companies are venturing into the emerging markets where UK Export Finance support is usually most relevant.”. See: http://www.ecgd.gov.uk/about-us/introduction-to-ecgd/ecgd-low-carbon-sector

376 Q 224
Conclusions and recommendations

Defining a green economy

1. The whole economy will need to be green and traditional sectors will need to be transformed. This will require the Government taking a longer-term view, driven by a clear definition of a green economy. The Government must set out a clear definition of a green economy that addresses all three interdependent pillars of sustainable development, including ‘social’ considerations, well-being and environmental limits. (Paragraph 16)

2. There would be environmental, energy security and economic benefits from making a transition to a green economy. Putting the environment at the centre of the economy would help achieve sustainable use of natural resources. There are clear benefits of acting now, with the costs of inaction far greater if we wait. Expenditure involved in making the transition to a green economy would be an investment, not simply a cost. Investing in renewable sources of energy would increase our energy security by reducing our reliance on imported fossil fuels. Investment in a green economy could deliver more jobs overall than the same investment in the high-carbon economy, but there is little commonly agreed data on this. In order to build public support for a green economy, the Government needs to be clear with business and the public about how the costs of the transition, including the costs of inaction, compare with the benefits. (Paragraph 29)

Enabling the transition to a green economy

3. The Green Economy Council has an important role in any further development of the green economy agenda. Increasing its membership to include greater representation from civil society would demonstrate that the green economy is not just a business agenda. Transparency would give the public confidence that a green economy is being pursued in a fair and inclusive way. We recommend that the Council should publish an annual report of its deliberations as well as its assessment of progress towards the green economy, as part of a wider initiative to publicise the work of the Council. (Paragraph 32)

4. The Government’s overall approach in Enabling the Transition is too focused on voluntary action, and relies primarily on the market to deliver the transition. The Government has not set out a new, comprehensive or strategic approach to the green economy, but rather listed existing policies. Defra promised a ‘Roadmap’, so we are disappointed that Enabling the Transition did not set out a clear trajectory to a green economy or any time-bound milestones for businesses to achieve. (Paragraph 42)

5. Enabling the Transition is business-focused, and as a result there are some clear policy omissions from the document, in particular the Government’s work under the ‘social pillar’ of sustainable development such as the Measuring National Wellbeing Project. The Government must be more explicit on how it will engage individuals, communities and local government on the transition. (Paragraph 46)
We recommend that the Government fully incorporates the principles of *Enabling the Transition* into future revisions of the *Plan for Growth*. What is needed is a green economy strategy which is Treasury-led and addresses the economy as a whole. (Paragraph 49)

**Reflecting environmental limits on growth**

Absolute ‘decoupling’ of resource consumption and economic growth, even if possible, would require major economic, technological and social changes that together would constitute a huge political challenge. The Government should set up a unit to examine the relationship between growth, prosperity and quality of life to understand how best to generate economic activity and jobs, while at the same time promoting sustainability and living within environmental limits. The Government also needs to quantify those environmental limits that are most likely to be affected by economic activity in the UK, and to build those limits into a green economy strategy. (Paragraph 56)

The Government’s approach to directing consumer demand to more sustainable choices relies on businesses providing better information, but it has deferred a decision on whether to make emissions reporting mandatory for the private sector. The Government must introduce such mandatory reporting urgently. It should also develop, with stakeholders and committed businesses, minimum sustainability standards which could attract wide acceptance. (Paragraph 62)

**Delivering the investment needed to transition to a green economy**

We are disappointed that no new incentives to support the green economy were announced in Budget 2012. In future Budgets, there should be greater consideration given to support for the green economy. (Paragraph 68)

The Government should delegate to an independent body, perhaps the Committee on Climate Change, a role in setting tariffs and charges aimed at reducing emissions, as a way of reducing political risk (and thereby uncertainty) for investors. (Paragraph 69)

There was no discussion in *Enabling the Transition* of the role that UK financial markets could play in helping to finance the green economy. The Green Investment Bank will be an important test of how effectively the financial market can support green investment. To expand the scale of investment, however, the economics need to change fundamentally, and that requires the costs of ecosystems being embedded in business activity. (Paragraph 72)

**Reflecting the full environmental ‘costs’ in investment decisions**

The Government should instruct the Green Economy Council to advise formally the Treasury, Defra and BIS on how green infrastructure can be enhanced, building on the recommendations of the Ecosystem Markets Task Force, and to publish that advice. (Paragraph 78)
13. The Government wants the value of nature to be reflected in policy-making, and it has work underway to take this forward. For the private sector, however, the Government plans only to provide advice and guidance to business on how they can measure their impacts on natural capital. Also, the Government should, with like-minded businesses, trial the application of that guidance and to explore what further research is needed. (Paragraph 79)

Fiscal measures

14. Nearly two years since making the commitment to increase the proportion of tax revenues accounted for by environmental taxes, the Government still has no strategy for achieving this commitment. It has not published its definition of an environmental tax, and it is unacceptable that nine months after our Report on Budget 2011 was published we are still waiting for the Government to respond to our recommendations in this area. In its response to this Report, the Government must set a date by which it will publish its definition of an ‘environmental tax’. (Paragraph 82)

15. The Government should set out its ambition for how data on natural capital in the National Accounts will be used. It should develop targets for improving the state of the environment, similar to the ‘fiscal mandate’ for the public finances, and establish transparent reporting against such targets. The Natural Capital Committee’s work on a ‘natural asset stock check’ should be one of the basket of indicators used to measure the green economy. (Paragraph 84)

16. An independent body is needed to examine the linkages between the state of natural capital and economic policy, and to provide advice on whether growth in the economy is being achieved at the expense of stocks of natural capital. That body could be an Office for Budget Responsibility with an extended mandate, or the Natural Capital Committee with an obligation to report publicly rather than to the Government. (Paragraph 85)

Other policy tools

17. Regulations have an important role in protecting the environment. The impending consolidation of environmental regulations must not be a smokescreen for lowering the protections they afford in a short-term pursuit of growth. The Government should consult and engage fully not just with business but also with environmental stakeholders. (Paragraph 92)

18. Additional action is needed to ensure that there are adequate skills to support a green economy. The Government should produce a green skills strategy to ensure that skills and training provision can match the aspirations of green economy policies. There are difficult judgements to be made, however, about the extent to which Government rather than business should take the lead in identifying the required skills. Where Government can most help is in providing stable long-term policy framework on the green economy, which will provide the certainty that business needs to be able to make long-term investment in a skilled workforce. (Paragraph 97)
19. In respect of Government procurement, the emphasis in *Enabling the Transition* was on value for money and streamlining processes. In responding to this Report, we recommend that the Government go further and set out how it intends to use its procurement expenditure to help develop markets for green goods and services and how it intends to monitor progress in doing so. It should also set out what specific changes it intends to make to ensure that Government procurement meets the requirements of the Public Services (Social Value) Act. (Paragraph 100)

**Measuring the green economy**

20. To demonstrate its commitment to a transition to a green economy, the Government must set indicators and targets by which progress can be measured. These should capture the state of the environment, social fairness and well-being, not just the emissions reductions associated with the *Carbon Plan*. The Government should draw on the best aspects from the numerous measurement regimes already being developed internationally as well as within the UK that go beyond economic indicators such as GDP. Indicators should also include a measure of progress in ‘decoupling’ economic activity in the UK from our consumption of natural resources and emissions. (Paragraph 106)

21. The Green Economy Council has a role in monitoring progress towards a green economy. It should be tasked with reviewing and reporting on progress in developing indicators, and then with regularly reporting the results. (Paragraph 107)

**The Rio+20 Summit**

22. After the Rio+20 Summit, the Government should examine the scope for subsuming agreed Sustainable Development Goals in the metrics that it should be developing to monitor progress with moving to a green economy. Furthermore, the Government should return to the strategy set out in *Enabling the Transition* to consider whether any aspects of it conflict with any Sustainable Development Goals or other indicators agreed at the Summit. (Paragraph 109)

23. International efforts to deliver a step-change in the transition to a green economy will be taken forward by the Rio+20 Summit, where world leaders will come together to set out a clear vision of the green economy and agree a framework for action. For the Government to be a credible voice at the Summit, it must ensure that it puts in place a strong domestic policy framework to drive the transition to a green economy in the UK. Given the criticisms of the Government’s approach domestically, there is a clear need to examine the Government’s role at the Rio+20 Summit, and its contribution and its commitments made. We plan to undertake such a review. (Paragraph 110)
Formal Minutes

Monday 30 April 2012

Members present:

Joan Walley, in the Chair

Peter Aldous
Mark Lazarowicz
Caroline Lucas
Mr Mark Spencer
Dr Alan Whitehead
Simon Wright

Draft Report (A green economy), proposed by the Chair, brought up and read.

Peter Aldous and Caroline Lucas declared interests as members of the Aldersgate Group.

Ordered, That the Draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 110 read and agreed to.

Summary agreed to.

Resolved, That the Report be the Twelfth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for printing with the Report, in addition to that ordered to be reported for publishing on 7 and 14 September 2011, 12 and 26 October 2011, 2 and 24 November 2011, 7 December 2011, 11 January 2012 and 18 April 2012.

[Adjourned till 10 May at 2.00 p.m.]
Witnesses

Wednesday 7 September 2011

Professor Tim Jackson, University of Surrey, Jules Peck, Partner, Abundancy Partners, and Chair, Edelman’s Sustainability Group, James Meadway, Senior Economist, New Economics Foundation

Wednesday 14 September 2011

Andrew Raingold, Executive Director, Aldersgate Group, Adrian Wilkes, Chairman, Environmental Industries Commission, Frank Price, Director of Sustainability, Grontmij

Wednesday 23 November 2011

Dr Gordon Edge, Director of Policy, Renewable UK, Dr John Constable, Director, Renewable Energy Foundation, Dr Alex Bowen, Principal research Fellow, Grantham Research Institute on Climate Change and the Environment

David Powell, Economics Campaigner, Friends of the Earth, Molly Scott Cato, Green House, Philip Pearson, Senior Policy Officer, TUC

Wednesday 14 December 2011

Janice Munday, Director, Advanced Manufacturing and Services, Department for Business, Innovation and Skills, Steven Fries, Chief Economist, Department of Energy and Climate Change, Mallika Ishwaran, Chief Economist, Department of the Environment, Food and Rural Affairs, Andrew Lawrence, Director, Strategy and Sustainability, Department for Environment, Food and Rural Affairs, Peter Schofield, Director, Enterprise and Growth, HM Treasury

Wednesday 14 December 2011

Rt. Hon. Caroline Spelman MP, Secretary of State for Environment, Food and Rural Affairs, Chloe Smith MP, Economic Secretary, HM Treasury, Andrew Lawrence, Director, Strategy and Sustainability, Department for Environment, Food and Rural Affairs, Peter Schofield, Director, Enterprise and Growth, HM Treasury
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## List of additional written evidence

(published in Volume II on the Committee’s website www.parliament.uk/eacom)

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List of Reports from the Committee during the current Parliament

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### Session 2010–12

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| Second Report | The Green Investment Bank | HC 505 (HC 1437) |
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| Fourth Report | Embedding sustainable development: the Government’s response | HC 877 |
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| Tenth Report | Solar Power Feed-in Tariffs (Joint with the Energy and Climate Change Committee) | HC 1605 (HC 1858) |
| Eleventh Report | Sustainable Food | HC 879 |
Oral evidence

Taken before the Environmental Audit Committee
on Wednesday 7 September 2011

Members present:
Martin Caton (Chair)

Peter Aldous
Katy Clark
Zac Goldsmith
Simon Kirby
Mark Lazarowicz
Caroline Lucas
Ian Murray
Sheryll Murray
Caroline Nokes
Mr Mark Spencer
Dr Alan Whitehead
Simon Wright

Examination of Witnesses

Witnesses: Professor Tim Jackson, University of Surrey, Jules Peck, Partner, Abundancy Partners, and Chair, Edelman’s Sustainability Group, James Meadway, Senior Economist, New Economics Foundation, gave evidence.

Chair: Good afternoon. Welcome to the Environment Audit Committee. First a couple of apologies, for the late start caused by a division in the Commons and also that our Chair, Joan Walley, cannot be here because she is moving a new clause in the Health Bill that is currently under consideration at Commons. Perhaps if very briefly each of you could introduce yourselves and your background. Can we start with James Meadway?

James Meadway: I am senior economist at the New Economics Foundation.

Professor Jackson: I am Tim Jackson. I am professor of Sustainable Development at the University of Surrey and former economics commissioner on the Sustainable Development Commission.

Jules Peck: Jules Peck. I am a trustee of NEF and I have worked quite a bit with Tim Jackson on various things, and mainly I advise companies on sustainable development, well-being and limits to growth.

Q1 Chair: Thank you very much. I am going to open up the questions. There seem to be a lot of different interpretations of what the green economy means, ranging from greening the current economy by stimulating growth in renewables and green technologies, to a whole new economic system. What do you see a green economy as being?

James Meadway: There is a minimum definition which talks about green sectors of the existing economy and expanding those somewhat—that is the kind of absolute bare bones minimum—but I think to really seriously address some of the environmental problems that we are facing you have to talk about far more extensive definitions of a green economy. You have to talk about an economy that is able to perform its activities without breaching significant environmental limits, so you are talking about an economy that does not overstep the mark in carbon emissions, that does not overfish, that does not overgraze. There are certain absolute physical barriers to growth within that economy that a genuinely green economy will not overstep. That, I think, is the kind of definition that you need to start from. You can then also start to talk about well-being and social justice within that economy but essentially those are secondary issues I think.

Professor Jackson: I would agree very much that a green economy is one that is literate in relation to ecological constraints, resource constraints, climate constraints, biodiversity constraints, so that it is not heading in a direction that is bound to confront those constraints and cause environmental and resource related problems in the future. Where I suppose I would slightly pick up on James’ point is that I think that social justice is integral to that in the sense that it is possible to see a world in which rich economies develop resource-intensive consumption patterns that remain, at least temporarily, within resource limits. However, if the resource consumption levels are significantly higher—orders of magnitude higher—than in the poorest countries, as they are at the moment, that cannot be seen to be either socially just or sustainable. A green economy, to me, must be one that is consuming resources on a per capita basis that if equitably shared across a population of 7, 9 or 10 billion people could still remain within resource constraints. To me, the social justice element is integral to the way that you think about the resource consumption patterns in a green economy. For example, in climate—if you are thinking about the climate constraints—a green economy with respect to climate must not be consuming carbon, emitting carbon any faster on a per capita basis than can be sustained within the scientific targets that we know we have to meet.

Jules Peck: As I am at the end I am probably going to agree with everything that has been said already. The only thing I would add—because I do agree with everything that has been said—is I was sent a link to this Enabling the Transition to a Green Economy report which I think is to a large degree what we are talking about here, and I think those sorts of views are completely absent from this paper and that is a great shame. I think a lot of work needs to be done to integrate that sort of perspective of a shift from wealth...
Q2 Chair: The Government’s recently published document clearly does not deal with well-being or social justice. You find that as a major weakness in it.

Jules Peck: Absolutely, yes, because of all the things that—

Chair: Mr Meadoway, you would not necessarily agree with that, would you?

James Meadoway: Well, you can imagine a green economy that still is socially unjust, that does not deliver well-being, you can imagine this, and I do not think you would necessarily find it desirable to end up there. I think in practice you would, of course, also want to talk about social justice, and you would want to talk about the distribution of wealth, and you would want to talk about distribution of resources within that economy, but Tim raises a good point that as soon as you start to do that, there is a kind of a global perspective starts to open up; you could create quite an equitable, single, national economy here that respects its own environmental limits, but then does nothing about respecting social justice and the distribution of resources internationally. Potentially you start talking about very large issues indeed.

Professor Jackson: But it has immediate relevance, for example in relation to the UK’s climate change targets. We might think of ourselves temporarily, at the moment, as moving towards a green economy if our domestic carbon emissions are reduced but if we are reducing those carbon emissions as a result of trading finished goods with countries elsewhere in the world who are emitting additional carbon emissions, then it is not a green economy. Complex though it may be to talk about the green economy in a purely domestic context, it omits those critical issues both about resource constraints at the global level and about social justice at the global level. The reason why that is difficult for the Government to address at the moment, in a document such as this, is because it is challenging. It is challenging to get started, it is challenging to get started with this, it is challenging to get started with this, it is challenging to link ideas about global trade and it makes the Climate Change Act a much more challenging thing to achieve. It is not the kind of thing that you can talk about when the external costs of polluting industries are not internalised in risk, where the long-term resource risks

Q3 Simon Wright: What in your view are the first practical steps that need to be taken to deliver on and to develop the green economy? What do the priorities need to be?

James Meadoway: We may have some disagreements on this. Right now in the British economy as it stands, the first practical steps, I think, revolve around addressing the problem of demand deficiency. The reason the economy is in the state it is in is essentially due to the collapse of demand inside that economy over the last few years. That has particularly been driven by a collapse in investment spending, which has been the biggest single component of the fall in GDP over the last few years, and private investment has kind of disappeared. It has sort of recovered a bit over the last quarter or so but nothing to really speak of, and indications are that it is falling again. It has fallen by about 20% since its peak in 2007. It is a real slump. The reason that links into the green economy is because if we think of a recovery taking place in that private investment and for people to have jobs again and for other economically worthwhile things to happen, that does need to occur and it is likely to go for the easiest options first. So they go for the low-hanging fruit. It returns to the high carbon output economy we had in the past rather than finding a new lower path to take. It is a problem of path dependency—what you have done in the past is what you tend to want to do in the future, and if demand, investment demand in particular, recovers like that, it is a challenge for delivering any sort of green economy. One of the things that needs to happen is that the Government has to start to use its own resources to lay out a new path, to support the growth of investment in green industries and use its resources in order to make that happen.

The Green Investment Bank could be an element of that but I think its powers would need to be substantially increased. It would need to develop its own borrowing powers. It would need to be able to go out and really catch hold of those regions where development on that scale could take place, and on the kind of scale we are talking about it would have to be substantial commitment of resources. Potentially also I know that George Irvin and John Weeks have floated the idea of using RBS, one of the nationalised banks, as a kind of national investment bank. This too would be something where Government could use its own resources to stimulate demand and to lay out a new path for the economy to follow. As things stand, the likely progress out of this recession is back into the old world and not towards the new green economy.

Professor Jackson: I would see three broad strategic avenues. The first of them is the economy and that the direction of the economy is literate with respect to the green constrains—in relation to ecological constraints. We actually were at the forefront in the world in relation to that in terms of the Climate Change Act. But climate is not the only green fruit, and the issues around limits in relation to biodiversity, the constraints around finite resources, the impact on fish stocks, the loss of habitat and the pollution of ground water are all areas which are systematically under-accounted for in relation to the structure of economic activity. To me, route one—objective one—would be that our economic strategy is literate with respect to these environmental and resource constraints. This is just pure economic sense in relation to resources, where we may be facing resource constraints within the next two to three decades, even according to the most established and conservative sources. So area one is to establish these constraints for the economy to become literate.

The second one, I think, is similar to what James is suggesting. It is clear that we have a business as usual plan to get back growth, and that is to stimulate investment and employment in the areas in which we have habitually done that. Investment will go to those areas naturally and it will particularly go to them when the external costs of polluting industries are not internalised in risk, where the long-term resource risks
are not internalised in investment decisions, where the structural instabilities of the financial sector are not internalised in the investment decisions. This rush to get growth back, one could argue, is one of the first things that we should avoid, whether or not we want growth in the longer term. It is not so much about growth because that is how we know what to do, it is about creating employment. It is about the re- visioning of a financial sector, as James points out, which is suitable to invest in the transition to a sustainable, green economy. It is about creating the structures, the incentives that will direct investment in those directions. It is around the public sector’s own role in that investment process, both through the Green Investment Bank and through other vehicles that it might want to create public assets in. Ultimately, that again is not a trivial task. It is very nice to have a target like setting up a Green Investment Bank under restricted powers, with very specific technologies that we want to promote, but that will not work in an economy in which the other incentives are driving in a different direction. There is, alongside ecological literacy, a demand for an economic literacy—a literacy for an economy that works in a different way, where investment is channelled into transition, where investment is laid down in ecological assets, when economic structure is not simply business as usual, expansion of consumer demand, but is geared towards the provision of good quality human services in health, education, social care and community coherence at the local level. These are, I think, enormous conceptual challenges, but they are the starting point for the transition.

Chair: Have you anything to add, Mr Peck?

Jules Peck: Only that I would agree with all of that and there is much more detail on these steps in Tim’s book, *Prosperity Without Growth*, which if you have not read it everyone here should read; but I think there is a considerable roadblock to starting on the process of putting these steps into place. It comes down to the language we are using here—the green economy; sustainable development and sustainability is the language that has tended to be used for a long time. I have bored Caroline with my idea that the Green Party ought to change its name because it is slightly out of date, but green really is not what is important. Sustainable development is about real human needs within the limits of the planet and those two things have to be taken into account. This paper talks about half of that, but only half of that; it talks about the limits of the planet to some degree but it completely misses the other, probably more important aspect, which is human well-being, flourishing lives and so forth. There is a massive amount of data and research on this. If we are obsessed by growing the economy and greening the economy—putting a green veneer on what is effectively an obsession with growth—we are completely missing out the much more rich and important definition of prosperity, which is about increasing flourishing lives for everybody, for all our citizens. Until we shift away from that conceptual roadblock, we are not going to be able to start even beginning to think about these steps.

Q4 Caroline Nokes: In the global economy, what work do you think is needed to create the right international conditions to help the UK move to a more, should I say, sustainable economy now rather than a green one, and can you identify any other countries that you think have a successful green economy?

Jules Peck: There is not a lot of progress on this, to be fair, so I think it is going to be a question of leadership, and I think the UK has been a leader on sustainable development and it is high time we upped our game and became a leader on the redefinition of prosperity and a flourishing economy—an economy that delivers flourishing to all people. But there are interesting, slightly counterintuitive evidence bases, such as the *Happy Planet Index*, which the New Economics Foundation brings out every year. If you have not seen the *Happy Planet Index*, what that does, effectively, is to say which country delivers long, happy lives for its citizens with the least environmental footprint. That is exactly the question we should be asking of our economies. It takes three datasets—longevity which is a really good proxy for women’s empowerment, child mortality, all sorts of developmental issues. It takes environmental footprint data, and it takes well-being data, and it cranks it all into a machine and out the other end pops a list of which countries are the most ecologically efficient at delivering long, happy lives. I am afraid Britain does not do very well. America does much, much worse. Countries that do well are places like Costa Rica, a lot of Central American countries, countries where they are not hyper-consumerist; people are not starving but they are not all chasing the next consumer object. There is usually much more community cohesion, the sort of things that Cameron talks about in the Big Society. Those are the sorts of constituents of society which seem to lead to long, happy lives with the least environmental footprint.

Chair: Have either of our other witnesses something to add to that?

James Meadway: Potentially, I think partly the issue is that the examples of genuinely green economies at present are few and far between to the point of near non-existence, but what we are talking about here is a transition—a shift from an old way of operating the economy to a new way. There are previous historic examples of economies that have done this from which some lessons could potentially be learned. It is usual to talk about East Asia, South Korea and Japan as places where the government displays leadership, displays the necessary qualities of getting people together, organising itself sufficiently to provide sector-level support, through the provision of credit in particular, to certain sectors and therefore develop the economy. We are talking about quite a different kind of transition here, but one that would require those elements, as Jules said, of leadership, of overcoming a very large co-ordination problem inside the economy where lots and lots of different groups of people and organisations all have to start to point in more or less the same direction, and no one will take the first step, because the costs of doing so are high, the risks of doing so are high. Therefore there is a clear role for
Government in lots of different ways to enable that co-ordination process to take place.

The other good example—in many ways better I suppose—is Finland, which made a sharp transition in the midst of a very, very deep recession in the early 1990s from being a largely resource-dependent or heavy resource exporter. Its major market in the USSR collapsed. It had little choice, with unemployment at 20%, other than to try and reinvent itself and the Government stepped in at this point, built on some of its existing strengths in engineering and developing strength in telecommunications, laid out a kind of national recovery plan to develop the Finnish economy, and Finland today is now a world leader in telecommunications devices, rather than being a world leader in the export of timber. That is how transition can occur in a developed economy and that is the kind of example we might want to look to.

Professor Jackson: Your question was about international conditions. I do think, as James said, there are lots of things you can take from different places. Jules mentioned the indicators issue and there is a lot of international work around indicators beyond GDP—OECD’s Beyond GDP process, the Sarkozy Commission, international examples like the Happiness Index and the Gross National Happiness measure in Bhutan. These are all examples of different ways of measurement and I think one of the conditions—one of the international conditions—is around different measurement frameworks and consensus around those frameworks. The UK’s interaction with those international efforts is incredibly important, but I think there are two other areas where international conditions matter to the domestic ability to create a green economy: one is in relation to trade and the other is in relation to finance and the structure of global finance. There are clear places where the conditions of trade matter, in terms of our ability to ensure that our responsibility for environmental impact lies within our own control. The question of whether it is possible, for example, to protect our own interests in environmentally sustainable products depends on the conditions of trade laid down at the international level. In finance I think it is particularly important; it is very difficult for an individual nation to go it alone in terms of restructuring its financial sector and its financial conditions in the absence of international endeavours. Such international endeavours already exist, for example, around the regulation of the financial markets in the wake of the crisis, around efforts like the Sustainable Stock Exchanges—an example that I like very much—in which disclosure of environmental impact would be a pre-condition of listing on the Stock Exchange. This looks like a quite minor amendment to existing set-ups but it could be immensely powerful. Those kinds of initiatives are to be encouraged. There are also of course suggestions that would slow down the speed of global finance that would then make it easier for an individual nation to protect itself against capital flight. A Tobin tax on financial exchange is one of those suggestions. Finally, I think what is becoming increasingly obvious in the international field is the question of debt. National debt and debt restructuring is going to be the critical issue, in terms of not just green economy but probably financial and economic survival, particularly in the Eurozone, in the years to come. There has to be. I think, a vigorous effort to think about how debt restructuring is going to work, as increasingly the poorer economies in the Eurozone face unmanageable debt and are forced into restructuring packages that have nothing to do with the green economy but are, in fact, debt reinforcing in some of their aspects and unlikely to deliver anything sustainable.

Q5 Caroline Lucas: I want to ask a follow-up question. Professor Jackson was just talking about flows of international trade, and I wonder how compatible you think current trade rules are with an aspiration towards a greener economy, given that if you are going to try to relocalise your economies in any way, currently world trade rules are not very helpful to that end?

Professor Jackson: They are not very helpful to that end at the present point in time, and I think the response to that is either to engage in those negotiations to, for example, further the talks around the ideas of border tariffs to create conditionality that is within the sovereign rights of the nation to impose in relation to environmental and social conditions. The second response that an individual nation can do is to think structurally about its trade patterns. Some commodities are more naturally traded than others. Some sectors are more local than others. It is possible, even within existing trading restrictions, to create restructuring that promotes and supports those industries which are naturally local. One can think about supporting food industries that are local; one can think about the provision of healthcare and education, which are naturally local service provision activities. To me, that idea is one of the building blocks of a green economy. It is the idea that what you want your economy to deliver is high quality services to allow people to flourish. This is something where local sectors, which can be supported by Government policy, are a natural deliverer of those services.

Q6 Caroline Lucas: Can I just push you a little further, because we are still at a fairly abstract level. Would it mean that you would support, for example, taking agriculture out of WTO in order to then be able to protect your local food economy?

Professor Jackson: Taking agriculture out of the WTO is obviously something that is not entirely a sovereign activity. That’s where it gets very difficult, where you have to engage in both strategies. You have to find everything you can to support your agricultural industries which are naturally local. One can think structurally about its trade patterns. Some sectors are more local than others. It is possible, even within existing trading restrictions, to create restructuring that promotes and supports those industries which are naturally local. One can think about supporting food industries that are local; one can think about the provision of healthcare and education, which are naturally local service provision activities. To me, that idea is one of the building blocks of a green economy. It is the idea that what you want your economy to deliver is high quality services to allow people to flourish. This is something where local sectors, which can be supported by Government policy, are a natural deliverer of those services.

Q7 Zac Goldsmith: I wanted to pursue this theme. My first question is do you think there are any signs at all of a willingness at top levels in any country to renegotiate the trade rules in such a way that sustainability is—I am tempted to say—possible? Are
there any political signs at all that this is even close to getting into the agenda?

Zac Goldsmith: Not just at the WTO level, but trade.

Professor Jackson: Trade generally. A little. It is a conversation, as I’m sure you know, that has gone on over decades and has been frustrating for decades. Has anything changed recently that might impact on that? Interestingly, one of the things that has changed is the balance of political power in the world, so that the trade rules as they were inherited and laid down are essentially still a kind of outcome of post-war consensus and Bretton Woods power structures. That has changed and it has changed in the wake of the financial crisis, so there are other interests coming in. They may not make that an easier place for a development to be negotiating something different, but they have changed the context of those negotiations.

There is also, I would argue, and I have witnessed this at a personal level, something more in the way of humility among some of the key figures, for example, in WTO, to think differently about the structures of trade and to incorporate some of these aspects. On the other hand, you could argue that what has made that more difficult to achieve in terms of green economy is the harshness of the financial conditions and the harshness of the situation which the developed economies now find themselves in—the new trade negotiation.

Q8 Zac Goldsmith: Just one further question if you do not mind—again on this issue. I take it from what you are saying that you see renegotiating the trade rules as a prerequisite to getting where we need to go and the question relates to how we get to that point.

Do you see that happening as a result of international discussions and negotiations, which, in my view, is almost too depressing to contemplate, or do you see it happening as a result of individual national actions on individual issues at the beginning of the process, almost chipping away at these trade rules, with perhaps a country deciding to opt out from the aspects of the trade rules in relation to food or fishing, or perhaps a country deciding to opt out from the aspects of trade rules as they were inherited and laid down are essentially still a kind of outcome of post-war consensus and Bretton Woods power structures. That has changed and it has changed in the wake of the financial crisis, so there are other interests coming in. They may not make that an easier place for a development to be negotiating something different, but they have changed the context of those negotiations.

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Jules Peck: There is a risk that the intractability of international negotiations around things like WTO is used as an excuse by politicians not to do things that they can do nationally, and the things that are happening—take agriculture, the flourishing of things like Land-share, Transition Towns or sustainable food initiatives—are all happening despite what the Government is doing. Government are doing nothing to support those things; the flourishing of collaborative consumption and grassroots action is happening because ordinary citizens have given up on Government and big business bringing the solutions they are looking for. I don’t think we should kick this into the long grass by just saying, “WTO, oh, don’t do anything.”

Q9 Caroline Lucas: To go back to business, in a sense, Jules, you said in your introduction that you spent some time advising business and we often sit here and have representatives for business sitting there telling us reasons why they cannot go for higher environmental standards, because of international competitiveness and it will put them out of business and they will have to relocate and so on and so forth. That is always the tension point whenever we debate these things and they come up against the stark realities of people’s businesses and they feel they are under threat from the green agenda. What do you say to businesses who have those fears?

Jules Peck: Most of my work with business is focused on the kind of things that Tim and I have been talking about, which is a redefinition of prosperity through the lens of well-being. What I do is strategic innovation, usually at the very top of companies, often with CEOs, to help them re-vision what their company could be about—business model, the products and services—to be businesses which deliver maximum well-being to their consumers and to wider society with the least environmental footprint. That is the starting point.

There are, surprisingly, many CEOs and senior people in business who, behind the scenes, will agree with my thesis, for instance, that we have reached the limits of growth and that macro-growth on a planetary scale is no longer possible and we need to redefine things through the lens of prosperity and so forth. They are loathed to come forward publicly; that is one of the problems. I think that will happen more and more.

Due to frustration with the lack of facilitation for the kinds of things that need to happen by the market we have at the moment, we will see business leaders coming forward. But I think one of the fundamental challenges for them is the market. The market is set up in the wrong way to facilitate the sorts of things they are seeking to do, both because it is not focussing on delivering well-being, but also because taxation regimes are inappropriate, regulatory regimes do not support the right sort of things and, particularly, the financial sector is far too short term. One of the big bugbears if you are a CEO, one of the really big challenges to doing anything pretty radical in this space is that your shareholders just are not interested and won’t let you do the sorts of things that you want to do. We are beginning to see some corporate leaders being outspoken on that. Paul Polman, the CEO of Unilever, as you may have seen recently, has said, “I don’t work for the shareholder, I work for the customer”. He is pushing at the boundaries of Capitalism 1.0 in that space.
More and more, either current incumbents are going to have to look for different types of shareholders—co-operative, mutual, employee ownership type models—or Government is going to have to step in and give much more definition of fiduciary responsibilities of the finance sector around things like sustainable development, environmental and well-being issues, or those sorts of current incumbents are going to die a death and these sectors are going to be taken over by things like collaborative consumption, WhipCar, Zipcar, Landshare, you name it. There are more Land-share initiatives in America now than branches of Wal-Mart, and that’s from a standing start four years ago. These sorts of things are flourishing, as I said, despite support from Government.

Q10 Caroline Lucas: I know I need to move on, but I want to ask you about efficiency. Basically the Government’s vision of a green economy is one that is basically business as usual but a bit more efficient. Is efficiency going to be enough to get us there? That is their definition of green growth. It is growth that is a bit more efficient in terms of use of resources.

Jules Peck: The sorts of ecosystem services that are talked about are often public goods, not private goods. The Holy Grail is absolute decoupling between economic growth and throughput of material resources—the planet. If we could discover the perpetual motion machine tomorrow, perhaps we could reach that. But if you look at the scale and the urgency of the challenge that we face, because we have gone past the limits on crucial things like atmosphere, it is just inconceivable, if you look at the work that Tim has done on the scale of the challenge—reducing from, what is it, 700 grams of CO₂—

Professor Jackson: Seven hundred and sixty-eight.

Jules Peck: Every global dollar of economic output currently equates to 768 grams of CO₂. If you wanted to reach a 450 parts per million target by 2050—which, of course, is too high a target, it should be 350—just going with that very liberal target and said that in 2050 the planet would go down to 6 grams of CO₂. That is a massive transformation which pretty much literally does require a perpetual motion machine. It is just not going to happen in time and, therefore, the efficiency thing is a dead end. Sufficiency is the frame that we should be thinking about, not efficiency.

Professor Jackson: Efficiency is none the less essential.

Jules Peck: It is important, yes.

Professor Jackson: We do need those more efficient technologies, I think, and Jules is right, the numbers speak for themselves. The challenge is if you really want to keep expanding your aspirations and have a chance for 9 billion, or now 10 billion people in 2050, to achieve those aspirations. Technology itself, by itself, is not going to deliver green economy.

Q11 Dr Whitehead: The Government’s Natural Environment White Paper that came out recently has been floating the idea of reflecting the value of the natural environment in decision making—the Secretary of State was recently talking about computing the value of bees to the business economy. How real or practical do you consider that sort of concept might be, particularly in terms of how business might incorporate those sorts of ideas into their operations?

Professor Jackson: Is that a question about how natural, how easy it is for businesses to incorporate that in their operations?

Dr Whitehead: Yes. The claim in the Natural Environment White Paper is that you can indeed start to produce metrics of natural environment value for transactions. I must say, I find it very difficult to see how you could incorporate that sort of metric into business activities in the way it is put. I wonder whether you think that has any way to run or has any value or, indeed, has any practical way of being incorporated into business activity.

Professor Jackson: I think it has some practical ways of being implemented. In fact, some attempts of that have already been put in place. I’m thinking, for example, of the Prince of Wales Accounting for Sustainability project that attempts to systematically incorporate at least some environmental impact into its accounting systems. Once you get them into those systems they are at least possible to be systematically internalised in decision-making processes in business. That doesn’t necessarily still impact on financial decision-making processes, although it might do. To get that further step you need the monetary valuation to be a part of the exercise. That either happens at the business level through an individual determination to internalise those costs into decision-making processes or it has to happen through pricing structures that are laid down through taxation systems, incentive systems, possibly even grant funding systems, that essentially operate as economic mechanisms to internalise the values that you are assigning to the natural environment. Simply saying that the natural environment has a value, and even being able to compute it, as you can in some cases, is not, in itself, sufficient to ensure that it is internalised in business decision-making processes.

Q12 Dr Whitehead: You made the distinction between environmental impacts on balance sheets and what I take it the Environment White Paper is talking about which is that you say, making a metric of the natural environment; one is the ecological limit, i.e. what would not be there, and the other one is what would be there. Is that a reasonable distinction?

Professor Jackson: Yes. I think what I’m suggesting is that there is a spectrum of internalisation processes and some of them are hard. If there is an external cost on carbon, for example, that is a hard internalisation of the environmental impact of a business’s activities. If there is a process or even a requirement on businesses to disclose certain environmental impacts, they would then have to put in place accounting systems and they would begin to make decisions that would affect that disclosure and would, therefore, have an impact in terms of changing business practice. The monetary valuation of a business’s impact on the environment is, if you like, the hard end of that spectrum of influence on business.

Jules Peck: The sorts of ecosystem services that are talked about are often public goods, not private goods.
PUMA is doing probably the most groundbreaking work of any company on these sorts of accounts but they are shadow accounts: at the end of the day, they are not real accounts. Businesses are beasts of the market and, as I have said, most of these goods and services are not of the market, they are public goods. Unless Government steps in and somehow makes these become part of the market or regulates to protect them from the market, the market is blind to them.

**Dr Whitehead:** Does that imply, because of the essential public good nature of a number of these things, that eventually, in order to chop it up and boil it down to a number of individual—

**Jules Peck:** That is the tragedy of the commons, isn’t it? It is often the case. There are things that we have brought into the market like the atmosphere, albeit at an insufficient level of pricing.

**Professor Jackson:** I do not think it necessarily does imply that. I think what I was suggesting with this spectrum of influence was that there are different ways of internalising that decision-making process that do not necessarily involve the marketisation of the services and the commodities themselves. Accounting disclosure is one means of doing that: regulation is another. Indeed, a shift in the mindset in which businesses themselves are engaging in the process of remaining within environmental limits is also a part of that process. As Jules said, we do now see businesses—quite big corporations—making those kinds of decisions about their internal operations.

**Q13 Peter Aldous:** Could you look at what I call the three players’ role in the move towards the green economy—the Government, businesses and people? If we look at the Government’s approach, I think you might say up to date their approach has been to rely on businesses leading the way. Will this approach, do you think, deliver the green economy you have described? Businesses are largely driven by the profit motive. How do you see them transforming to a green economy based on well-being? Will some businesses more than others be able to adapt more readily? As far as the people—the public—are concerned, do you have a sense that the public will support the move towards the green economy? Are there some sectors of society more than others that perhaps will be more resistant and will not take it up? You may want to divide that question up, with one looking at the Government, one looking at it from the business point of view, and perhaps Mr Peck might want to look at it from the public—people—point of view, in view of the work that he has done on the shift from passive consumers to active citizens.

**James Meadway:** Yes, the Government’s current approach is something along the lines of—the language used in enabling the transition to a green economy is full of this—“Businesses could do this, businesses might want to do this, businesses could if they thought about it perhaps consider.” That rather passive voice dominates the documents and the unfortunate problem is that this is almost certainly not good enough, never mind to talk about the kind of very large-scale transition we have mentioned as the green economy; even the sort of minimal green economy, or greening of the existing economy, does not really look very likely on that basis.

It comes back to something I mentioned earlier, which is that a transition of this kind—a shift of this kind—relies on privately motivated businesses being able to identify a big potential thing in the future, which is the green economy, and the possibilities of making profits from that, and taking on the costs of making that transition without knowing that everybody else is going to do it. They don’t know that all the other private businesses are going to make that transition. There is no point in you saying, “Okay, we’re going to green our operations, we’re going to have to try to reform what we are doing” if you don’t know that everybody else is going to do it and you don’t know this new green economy is going to turn up in the future. It is a co-ordination problem.

As Jules mentioned, there is a big public good issue here. There is a public good in a green economy and private actors are not necessarily well able to achieve that public good by their own actions. Someone has to step in at some point. The usual someone here, the biggest collective actor we have, is Government. There is a role for Government in being more interventionist, to use a sort of old-fashioned word, than it has been. Some of that might include a kind of moral suasion, I suppose, the laying down of what we would like to see happen, hoping that your influence will be enough to get people to act in the right ways, and that, I think, is more or less what the Government is doing at the moment. Some of that might include regulation, tightening up what businesses do and forcing them to act in certain ways and some of it would include taxation and spending. You tax the output of certain activities and you would subsidise the other kinds of activities. The combination of these different ways the Government could do that would be the way you would start to steer lots and lots of private businesses, in particular, to move towards a transition point. That, I think, would be the role that you would want to see Government play. That is not the role that it sees itself playing at the moment, but I think it is one that it could play.

As mentioned, other economies have, in the past, been able to act in this way. It requires a degree of national leadership, it requires a degree of national co-ordination, it requires quite a high degree of consensus about what you are doing, but I think it is possible on that basis.

**Professor Jackson:** I would want not to divide that question up. I think it is quite important not to. They are not independent actors and they have extensive influence over each other. When you divide it up, it looks impossible because Government cannot act because businesses are operating this way and people will not vote for them if they do. Businesses cannot act because incentive structures are this way, consumers will not buy it if they change. People cannot act because they want a decent life. For the last five years I have been directing an ESRC research group at the University of Surrey which looks specifically at the people side of it, people leading sustainable lives and the relationship between lifestyle, what people are doing and their impact on
the environment. I think there are a couple of key lessons from that that are pertinent to this task. One of them is that there are commonalities in the sense of wanting a decent life and in the society that we have; the decent life is expressed through consumerism, through material ambitions. It is not within the remit of Government to exercise moral suasion to persuade people to think differently and vote differently. It simply is not. In fact, interestingly, on the one occasion when the public, when consumers, when people want to behave differently in the face of a recession, their spending behaviour changes. They tend to save more than they spend. They tend to concentrate on necessity rather than luxury. They are much more prudent in terms of their expenditure decisions and their saving. That is the occasion when Government gets out and tries to persuade them to be better consumers because it is them as consumers that will get the economy back going again.

The other thing that our research shows is that the public is incredibly sharp at picking up moral and practical and political inconsistence. You do not trust a messenger from who tells you different things from different parts of their mouth. You do not trust a messenger who says, “We want you to be nice consumers who do not constrain the economy and buy the right things” with one voice and as soon as the hard times hit, “You should go out extending your credit in order to expand demand in the economy.”

This relationship between Government and public is an incredibly important lesson from the study; they are both dependent on each other, in terms of their ability to act. But there is one key message from this work on lifestyle and environment that I think is worth also airing, which is that there is a section of the population who are already highly motivated to change, who are already taking action to invest their money differently, who buy different kinds of things, who have green energy tariffs, who live often very simple lives, who give up the propensity to consume and who work less, take lower salaries and lead a different kind of life.

This is a very interesting section of the population because one interpretation is to say what we need is to get everyone like this and then we would be fine. That is difficult because if everyone was like this we would probably crash the economy. That is one of the issues. The other issue is that these people themselves, although sometimes they are measurably different in terms of the values they express and the lifestyles they lead, face constant conflict and struggle in attempting to lead the kind of life that Government sometimes tells them that it wants them to lead. Those conflicts are real, they are around physical infrastructures, they are around institutional signals, they are around incentive structures, they are around social identity and the way in which they are perceived. While these obstacles to people leading the change exist, they will not change. They cannot change and it is morally suspect for Government to use the exercise of suasion to persuade them to change.

The one key area, where I think this does put the ball very much back in the court of Government, is in relation to shifting those structures within which we lead our lives. The infrastructure of public transport, the infrastructure of public goods, the infrastructure of health, the infrastructure of finance and the institutional incentives for saving and borrowing are all a part of the architecture over which Government uniquely has a degree of control, but which could have enormous impacts in releasing what is, in fact, a latent desire for a decent life in a sustainable world that clearly exists in the population.

Jules Peck: Yes, I would agree with all that, so I will not add a huge amount. That latent desire is there, and in all the work that is done in a participative approach to work with citizens to help unlock what their real needs are and what they really desire out of life, all the sort of things that Tim was talking about come to the surface. The pressures of advertising and consumerism are blocking our ability to make this journey that I write about in *Citizen Renaissance*, the shift from the consumer to the citizen. I think fundamentally, again, I completely agree, you cannot disassociate business, Government and citizens. It really is a question of who is going to blink first, and fundamentally in a democracy I think it is the responsibility of Government to blink first when there is something as intractable, as serious as the issues that we have been discussing here.

To be frank, Government is asleep at the wheel. Politics is asleep at the wheel. This is not just the case in Britain, it is the case internationally. But politics and the Houses of Parliament are astonishingly asleep at the wheel on all these sorts of trends and these problems. It is despite, not because of, facilitation from Government that the sorts of things that I am interested in are happening. I will give you one example where progressive business and the *Citizen Renaissance* is coming together to deliver solutions with absolutely no involvement from Government, local or central. That is an initiative where I live called Bath & West Community Energy and that came out of something called the Transition Towns movement, which is ordinary people, butchers, bakers, candlestick makers, housewives, accountants, getting together in their front rooms and church halls and saying, “Right, we’ve had it with big Government and big business messing the planet up. We’re going to put forward the kinds of solutions that are needed ourselves.” Out of this has come a peak oil resilience plan, an energy downscaling plan and so forth, which has led to this social enterprise called Bath & West Community Energy. First round, £5 million. This is not chickenfeed; these are big enterprises. This is so big—bear in mind, this has all come out of the citizens, just normal people; this is so big that one of the big six energy companies—I cannot name it because it has not been announced, it will be announced in the next week—is investing £1 million of their own money at no profit into this community enterprise because they see it as the future of the energy market and they want to be in ahead of the rest of the energy companies. In America one in three people are part of a co-op for community-owned food or energy enterprise. These things are flourishing, exploding all over the world.

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1 Note by witness: [www.citizenrenaissance.com](http://www.citizenrenaissance.com)
and are going to happen more and more in the UK. I think it is beholden on Government to tune into these things, both at a local and central level, and facilitate them and put their money where their mouth is around things like the Big Society. The Big Society—the rhetoric at the Big Society should be precisely spotting these sorts of things and facilitating them.

Chair: Thank you. We need to move on to our last question this afternoon. Mark Spencer.

Q14 Mr Spencer: Thank you. The concept basically is so huge, it almost feels like we as the Government are a football team which has been told we need to win—which is achievable—but we need to win 35-nil and the targets are so far away, the task is so daunting. But unlike the football team with a 35-nil target, we do not have a physical target we can grab hold of because the way we have measured success in the past has been via GDP and that is very solid and measurable. What system could we use to measure? We have mentioned well-being and things like that, but what targets can we use to measure the success that we have to try and achieve?

Jules Peck: I don’t think it is so complex, to be quite honest. There is a great deal of research in welfare economics, in well-being and so forth, much of it from Nobel Laureates, not crackpots, which identifies the direction you need to take in developing indices and indicators around human well-being and flourishing. The other side of the coin, the planetary well-being and the planetary limits piece, there is again a great deal of understanding of the planetary limits piece. I think what is required now is to bring those two together and overlay both of those lenses on to what we will define as a prosperous economy, if you like, rather than a green economy.

Professor Jackson: It does become more complex when you abandon the idea that a simple indicator tells you your measure of success. I don’t think there is an easy simple analogy. Maybe you have balanced the number of goals scored against the red cards and your manager tells you, “I want no red cards this season.” It is not necessarily what the fans want—they want the goals and the trophies—but at least it is an indicator. Are those kinds of indicators available within this situation? Absolutely, yes. There are many of them and if you start even from basic economic premises—the GDP as the principal indicator—it is the wrong thing on which to be measuring the success of your economy. It does not tell you, for example, that your debts are expanding, that your assets are collapsing, that financial instability is round the corner and that your GDP in two years time is going to collapse. We had a Chancellor and a Prime Minister who insisted in fact that these were the golden years of the economy, an unparalleled season of growth of historical proportions. Yet within a matter of two years almost the entire system had collapsed. Why? Because we had focussed on a simple flow measure of output when what matters is the structure of assets, of balance sheets, of financial credit and liability, and the way that that works through the market.

Even at the very purely economic level we have not measured the right thing. To expand our literacy in relation to those economic measures is obvious; to expand them in relation to resource constraints and to expand them in relation to carbon constraints is also obvious, and yet at the same time it is clear that you do not do either of things, really, without an eye to basic social objectives. The measures around employment still matter, around the quality of employment still matter, around health in different demographics still matter, around the distribution of incomes still matters, around deprivation; these are all absolutely key indexes. It is not that we do not have the measurement instruments to guide the change, it is that we simply have been fixated on one of them and it was the wrong one.

Q15 Mr Spencer: Do all three of you support the Government aspiration to measure well-being? Are they going down the right route?

James Meadway: Yes, broadly. The issue with the well-being measurement is to what extent it then turns into real policy changes—to what extent it becomes something that Government listens to ahead of whatever GDP might be doing at the moment, and then alters what it is doing to suit the well-being measure. Now, whether that happens or not is a politically indeterminate thing. As I just said to Tim and Jules, my suspicion is that the desire of everyone to fixate on GDP is dwindling. Even the kind of minimal promises that rising GDP is supposed to offer—GDP goes up; this makes everyone richer—simply have not happened. The evidence now suggests for the last decade or so that median real incomes have fallen during a period of rising GDP. Even the blunt economic, “This is going to make you richer”, part of it is starting to fail. I think we can win support for a wider, broader measure of economic success. I think it has to happen if we are serious about a transition to a green economy.

Chair: We are going to have to draw to a conclusion now. I thank our witnesses very much; that was a very useful session. We are grateful and it will certainly inform our report.
Q16 Chair: A very warm welcome to all three of you, and the Committee is grateful to you for taking the time to come in and have this session with us on the green economy. Thank you for the evidence you have each submitted: we feel this is an important agenda. If I may, I would just like to start off by perhaps giving each of you the opportunity to set out for us how you think a green economy could go beyond the concept of living within environmental limits so that it improves wellbeing and addresses social equity issues as well. I would like to give that opportunity to set your scene. Andrew, would you like to go first?

Andrew Raingold: Sure. If I may, I would like to start with the definition that is in the Enabling the Transition to a Green Economy document that was published by the Government not too long ago, and that is that the green economy will maximise value and growth across the whole economy while managing natural assets sustainably. The Aldersgate Group welcomes certain aspects of this definition, particularly the emphasis on the whole economy, because a green economy is not just about a flourishing environmental goods and services sector. It is also about modernising traditional sectors and transforming conventional business models. But this definition should be improved. Firstly, it must incorporate social goals, because a green economy needs to be consistent with sustainable development and, in particular, with DEFRA's definition for a sustainable economy, which focuses on prosperity and economic opportunities for all. Secondly, there is no emphasis on the jobs and employment aspects of a green economy despite a just and smooth reallocation of jobs being absolutely critical. Thirdly, there is no reference to putting natural capital at the heart of the whole economy while managing natural assets sustainably. The Aldersgate Group welcomes certain aspects of the green economy. Thank you for the evidence you have each submitted: we feel this is an important agenda. If I may, I would just like to start off by perhaps giving each of you the opportunity to set out for us how you think a green economy could go beyond the concept of living within environmental limits so that it improves wellbeing and addresses social equity issues as well. I would like to give that opportunity to set your scene. Andrew, would you like to go first?

Q17 Chair: Thank you. What about the environmental technologies, Adrian?

Adrian Wilkes: For 16 years I have been running the Environmental Industries Commission to provide a voice with Government for the environmental technology and services industry, and our argument has always, funnily enough—I claim here modestly—been about the green economy. We have been saying there is a very strong market developing. When we first launched, the OECD figures talked of a global environmental market of about £250 billion. These are figures from a year or so ago, so definitions have changed, the renewable sector has dramatically expanded and is now £3 trillion. We are talking big economic opportunities for whoever grabs the lion's share of that market.

Equally, we were arguing for pushing environmental standards, and this is where I think we come from. Our members are providing environmental solutions to the highest feasible level that are cost-effective and based on cost-benefit analysis. If you push environmental standards, you are going to drive the rest of the economy to become more eco-efficient. We are seeing dramatic restraints looming in terms of natural resources. I saw a figure from the WorldWatch Institute last week that by 2030 China is likely to be using as much oil as the rest of the world is using today, and obviously there is a lot of talk about peak oil. That is one example of resource constraints that are increasingly confronting the whole economy, and I am sure, Joan, you will recall in the mid-1990s Jonathan Porritt launching that Factor Four book and arguing that we could maintain our standard of living and output using just a quarter of the resources that we use.

Q18 Chair: Given the implications that would have for social wellbeing and social equity issues, do you see the green economy agenda embracing that?

Adrian Wilkes: I think it inevitably has to, although obviously from our perspective we are arguing a purely economic case. However, we certainly would not be saying that you have to ignore the consequences.

If you are looking at the opportunities, high environmental standards and green jobs have an impact on job creation, and hopefully on the higher value sorts of jobs. Do we want our work force, for example, to be simply low-wage people who are throwing waste fridges into a piece of high-tech German-manufactured technology that recycles the fridges and the CFCs, and so on? It impacts on jobs, and it obviously impacts directly in terms of energy efficiency issues on fuel poverty. Yes, there is a strong social side to it, although I am afraid that from our perspective it is about economics.

Frank Price: Language shifts and changes, and some years ago, probably fairly recently in fact, we would have been using the word “sustainable” rather than “green”, or some time ago we would have used the word “environment” instead of “sustainable”. I think the green economy for me is a sustainable economy, because I am a little bit old-fashioned in my language, and that word conjures up the social, environmental and economic legs going right back to 1992 and the
Andrew Raingold: I would just like to add that, in Government impact assessments, very rarely gets examined and certainly is overlooked in that. That is an angle of environmental policy that very much, that is that we are looking at here is not just about significant green targets, such as zero carbon and zero waste and zero water by 2023, but it is also about renovating their core products, reducing saturated fats and also reducing salt levels. That includes a programme investing millions into research and development, and reshaping its portfolio with healthier products and new categories, such as healthy lunch products aimed at children.

Thinking back to an earlier time in my career when I worked in Sheffield City Council, the belief that we held strongly there when we were trying to replace the steel industry lost jobs was that the best way of giving someone a better quality of life and improving their well-being was to give them a meaningful job that paid a decent wage and gave them some self-respect, and I do not mean that in any sort of parochial or patronising way.

If the green economy is going to deliver, and I sincerely hope that it will, and we are going to do all that we can to help that happen, we will have more jobs and social well-being will improve as a result.

Q19 Chair: Just pressing you a bit more on this, do you feel that the definition of whatever we call it, the green economy, includes this whole issue about social equity? You work a lot or have contact with small businesses, with SMEs. Are they looking at business models that would be about not just generating income but dealing with wider well-being issues?

There was a report out today, which I heard on the news, in which the UK rated very poorly in terms of the well-being of children. Is that something that is included in the business models that you will be looking at, linked to this whole concept of the green economy?

Frank Price: From my point of view, from my perspective, yes. I am not that familiar with the SME sector, but in the sector that is just above the SME sector, if you like, employing 1,000 to 2,000 members of staff, say, the emphasis very strongly there is on sustainable and economic growth for the business and making it a good place to work. If you make it a good place to work, the implication is that you have social and welfare policies in place to assist your staff both within work and also outside of work, with the social and well-being issues and problems that they might have. So that is very firmly within the business models of that sector, as I understand it.

Adrian Wilkes: I would make a broader point, and that is that what we are looking at here is environmental protection, environmental resources, and then you look at the problems of pollution. A few years ago, Friends of the Earth brought out a report looking at pollution hotspots in this country and—surprise, surprise—they were in low-income areas. That is an example of environmental policy that very rarely gets examined and certainly is overlooked in Government impact assessments.

Andrew Raingold: I would just like to add that, in terms of business models, I think it is currently more common—particularly for our members but probably more widely—that business models focus on environmental outcomes, because that is where a much clearer business case can be made. But having said that, social outcomes really are at the core of a number of sustainability strategies. From our membership in particular, PepsiCo have put improved well-being right at the heart of their approach, so it is not just about significant green targets, such as zero carbon and zero waste and zero water by 2023, but it is also about renovating their core products, reducing saturated fats and also reducing salt levels. That includes a programme investing millions into research and development, and reshaping its portfolio with healthier products and new categories, such as healthy lunch products aimed at children.

I think there are other good examples out there. Marks & Spencer, which is another one of our members, has Plan A, which is saving £70 million a year in costs, and includes clothes exchange programme with Oxfam, which encourages its customers to bring old clothes into stores. While this is not a core business strategy, it is about a business engaging their customers in sustainability, and the outcomes have been very successful so that it has collected 3 million garments and raised £3.3 million for Oxfam, so it is addressing some of the barriers to the re-use of clothes.

Chair: That is helpful to know. We wanted to turn to skills to make sure that the subject did not drop off the agenda at the very end, so I am going to turn to Peter Aldous now.

Q20 Peter Aldous: The green economy will create new jobs that will require new skills. Do you think that the Government’s approach to ensuring that we have the right skills is sufficient, and if it is not, what should they be doing?

Frank Price: We had a debate about this yesterday. I sit on a panel that looks into one of the engineering journals from the Institution of Civil Engineers, and we were debating how the green economy is going to be skilled to meet the particular challenges that we will face. The one that we focused on was to do with buildings, building fabrics and the energy efficiency of buildings, and the techniques and technologies and skills that we will need to deliver our green agendas in 50 years’ time, particularly the carbon agenda by 2050, say.

Something like 60% or so of all buildings that will be in use then are already built, but they are performing, by and large, to the standards of 10, 20 or 30 years ago when they were constructed. The big challenge that we face in that respect is going to be the refurbishment of buildings, not new build. A lot of emphasis at the moment is on the BREEAM assessments, if you are familiar with those. There are BREEAM outstanding ratings for the whole of Canary Wharf, and those buildings down there are achieving fantastic energy efficiencies, but we are sitting in a building that is 200 years old. It will still be here in 50 years’ time and probably has a less efficient energy rating.

The skills and the technologies that we have for refurbishment are very much overlooked, and I see little or no Government attention paid to that. I would imagine, but I am only surmising, that you could apply that sampling to a whole range of technologies that are represented by the EIC and by the Aldersgate Group.

Adrian Wilkes: Andrew, a question for you because the Aldersgate Group have produced a report on this and probably have a lot more detail, but I would just...
make two comments. One is that generally—and I am probably going to repeat myself later during this session—we do not have joined-up Government, so there are parts of Government that are very focused on this agenda but the skills councils are not, and there needs to be more done on that. However, you will hear me talk a lot about the need for Government intervention, because there is a market failure, but to what extent is it Government’s job to tell private enterprise to re-skill its work forces? Having said that, I would then add a very important point that the private sector invests in skills and in research and development if it has the right policy framework to create confidence about long-term demand for their technologies and solutions. Ultimately, in my opinion, it always comes down to having the right policy framework, and that will then drive the private sector to invest.

**Andrew Raingold**

In terms of the Aldersgate Group position, clearly the development of new skills is absolutely crucial for a green economy. The Aldersgate Group has made the case very strongly for the need for a specific green skills strategy. That was being developed by the last Government, and they issued a consultation in their final months that was not pursued by the new Government. What did come out of the consultation was the National Skills Strategy, which included a few measures that will help develop the green economy, with a particular emphasis on apprenticeships and the development of STEM skills. But what we really need is a very comprehensive strategy looking at three very different types of skills. There are the core skills of the green economy. These include the need for new technicians and engineers, where one in three environmental firms report skills gaps and these are particularly acute in specific sectors such as offshore wind.

These skills take a long time to develop and are expensive, and there is certainly a role for Government in facilitating this. But there is also building on existing skill sets, because most of the jobs in the green economy are not entirely new in content. They generally will just require some top-up training, so a good example is an electrician learning how to fit solar panels. This generally is not very expensive and can be done very flexibly. But lastly, and of particular interest to the Aldersgate Group and our membership, is the development of generic skills, so these are the skills that will be required for all jobs and all professions, and include emphasising the leadership and communication skills that we require right from the top of a company at board level all the way down to customer-facing staff.

**Q21 Zac Goldsmith:** I wanted to press you on the strategy. I have not seen the details of the strategy that the last Government was developing, but if you were writing up the strategy now, if you were in government, specifically what would that strategy include? At what stage is it most appropriate for the Government to intervene? I think everyone would agree there is a need for a strategy of some sort, but the difficulty is knowing specifically what Government can do to fill those skill gaps.

**Andrew Raingold:** The first emphasis has to be on STEM skills and on education. We know there is going to be a huge ramp-up in offshore wind, for example, from 2015 onwards, and the planning for that has to be now because those skills do take a long time to come through. The skills strategy should focus on those core skills. The two other areas, particularly the last one in terms of generic skills, require a much more active role for business, so the Government needs to articulate perhaps what the green economy is and what skills it will require, but it is up to companies to then introduce training programmes to meet those skill demands.

**Q22 Zac Goldsmith:** How much of that do you imagine will come through Government-supported but industry-initiated apprenticeships? There are lots of new apprenticeships schemes being set up by BA and Thames Water and so on in my constituency, which are hugely successful, with 100% retention rates, and people are almost guaranteed a job at the end of it, but these are happening as a result of incentives that were created pre-election and post-election. It is a continuous programme. How much of it do you think comes down to intervention at that level and at that stage in the educational process?

**Andrew Raingold:** I think these types of apprenticeships are absolutely critical, especially focusing on training, because the majority of the work force for 2020 are already in work now. In terms of apprenticeships, one positive development has been the creation of 1,000 green deal apprenticeships, but the Government target for job creation by 2015 for home insulation is 100,000. You have to ask whether there is a gap there, but also how quickly will the Green Deal programme ramp up? The Government have to be careful about ensuring that their demand and supply side policies develop in tandem.

**Q23 Chair:** Can I just press you on the Government’s document, Enabling the Transition to a Green Economy, where they say what Government will do and what business could do? Under this heading, the Government document says that business could “help articulate skills demand through involvement in local enterprise partnerships and sector skills councils”. Is that an agenda that you are actively working on, and do you have that relationship with Government on the shift to the green economy in that area specifically, including, for example, with companies like GE and Siemens who have come in on the back of offshore wind?

**Andrew Raingold:** That is important, so it really is up to businesses to articulate those skill needs.

**Q24 Chair:** Is business doing that?

**Andrew Raingold:** It is doing that, but there is a latent demand for skills, so because of policy uncertainty in a number of sectors, it is not very clear what that skills demand will be. The more certain the Government policy, the clearer the articulation of the skill needs will be.

**Adrian Wilkes:** May I just add a point about skill losses? We have been focusing on creating skills for the future. In the water sector—and I will ask Frank...
to come in because he has been working in that area—we have lost quite a lot of skills over the last five years in particular because of the problem of the “boom and bust” cycle created by Ofwat’s 5 year economic regulatory cycle.

Q25 Chair: What sort of skills have you lost?
Adrian Wilkes: Engineers. It is all to do with the boom and bust problem of the Ofwat AMP cycle.

Frank Price: What happens in the water utility sector is that the Water Committee is regulated in a five-year cycle by Ofwat. It is called the Asset Management Programme, and we are currently at AMP 5 at the moment. There is obviously a peak of investment. The current AMP cycle will invest something like £22 billion in water infrastructure. The cycle started about 38 months ago and it is just beginning to get going. It is still in the ramp-up phase, so some time next year it will reach peak spend for a year, 18 months or so, and then it will drop off as AMP 6 approaches. So we get this enormous rise in expenditure in the infrastructure sector, and the supply side from the consultancy design and construction side of the water industry will lose 40% of their jobs—40% of their staff are let go—as the AMP cycle winds down. A lot of those people do not come back into the water industry. They find jobs elsewhere or they go abroad. We see that very particularly within the water sector, so when AMP 6 starts, we have to start re-recruiting and retraining, and the cost to the industry is fantastic. I do not have a figure, but it is enormous.

Adrian Wilkes: And there is a problem of how it impacts on the international competitiveness of companies supplying water pollution control solutions.

Chair: That is a very useful analysis, thank you.

Q26 Peter Aldous: I think I will just sum up. In your opinion, do the Government’s existing policies for higher education, further education and apprenticeships provide the framework for requiring the skills or do we need something completely different? Is it just a question of putting additional capacity in the system? It is not just a question of the Government doing this, because the industry has to buy into it as well, so what can be done to encourage them to buy into it?

Andrew Raingold: What is clear is that a specific green skills strategy would help articulate firstly where the skills gaps are—at the moment it is not clear—and then what action is needed to address them. Some of the solutions are likely to be consistent with what is currently happening in terms of the national skills strategy, but probably include ramping up certain aspects with more emphasis on STEM skills and on the educational needs that we will need to deliver the green economy.

One interesting piece of research that was launched last year was from the ILO and Cedefop, and that urged European policy makers to ensure that their policies on the green economy were matched by their skills and training programmes, and it finds that in the majority of European countries, that is not the case. The leader in this area is France, which has a very ambitious mobilisation plan for green jobs.

Q27 Zac Goldsmith: In all of your submissions, you were calling for a new policy framework for developing or promoting the green economy. Even though the Government has issued its own report, which we have already mentioned, Enabling the Transition, the implication is that there is something wrong with the Government roadmap, and it would be useful to hear from you where you think it is deficient—what is wrong with it specifically. It would be useful if all of you could answer that question.

Andrew Raingold: First, Enabling the Transition is a communications document. It is not a green growth strategy, and in the context of a communications document, it is quite helpful. It is very broad, there is some good content and, as I said before, it does focus on the whole economy. Having said that, it is deficient in a number of ways. The first one I would say is in terms of implementation, because I do not think this will reach a very wide audience beyond maybe the sustainability profession or those who are already aware of what the green economy is and the potential opportunities.

We would like to see, for example, a much more usable multimedia website with the latest developments on the green economy and job creation. A good example of this is the US stimulus package website, which shows very clearly where the money is being spent, where there are opportunities in the green economy and particularly the job creation impacts. That is one area, and I think also the name is not very helpful—Enabling the Transition to a Green Economy. It is very long, and I think it puts off the people who do not quite understand what green economy is.

Q28 Chair: What would you call it?

Andrew Raingold: It needs some thought, but maybe I will get back to you on that point.

Q29 Zac Goldsmith: If the tools you have just described were there, is the audience mainstream businesses? Who is not getting the message at the moment?

Andrew Raingold: I think mainstream businesses, but also there is a role to involve the citizen as well, as that is an area that has been completely left out of the green economy. Also, another area in which it could be improved is public relations. It was launched without any press activity or endorsement from No. 10 or the Treasury, which would have been welcome. Also, it should set out clearer principles to achieve policy certainty and stick to them, and most importantly, this document has to become mainstream in all departments, driven by the top with new policies, which is a very important point. There have to be new policies in order to meet the objectives of a green economy.

Adrian Wilkes: I think the most important point that I would make on this is the need for a high-level Government strategy, the concept of which I wholly endorse, and have been pushing for 16 years. We need joined-up Government, not just a few officials in a couple of Departments who are strong advocates of this agenda. We need it to be cross-departmental, very high-level and probably chaired by two senior...
Zac Goldsmith: Can I stop you for a second? In the earlier drafts, were there any specific policy measures or commitments or ideas that have since been removed, and if so, why do you think that is?

Frank Price: I am very tempted to say yes, but I could not give you a precise example. I would have to go back to the earlier drafts and look through, but I am sure I could find some.

Chair: If there were, it would be quite useful if you wish to write to us further. We would be very grateful.

Adrian Wilkes: Sorry to interrupt. On that point, I fortunately did see some of the earlier drafts, and from my perspective, there was a failure to make any new commitments. There were the other—

Adrian Wilkes: I think we have this wonderful policy timeline here in the Transition document and we have a similar one in the supporting document for investors. It would not take an A-level student more than a couple of hours to read through the ENDS Report over the last couple of years and put this together. There is a lack of detail. We know these things are happening.

Q32 Zac Goldsmith: It will be interesting to see, if you have access to earlier drafts and so on, what the changes are. That might help us to try to understand why those changes were made and if there were new policy ideas that have since been removed or more details on existing ideas. It would just be fascinating to know why they have been removed and also what the process was that led to their removal. We obviously cannot comment on that because we have not seen the earlier drafts, but if you are able to help with that after the meeting—

Frank Price: If we have two earlier drafts of it we could do a compare and contrast job for you.

Q33 Chair: Do you get any sense of what was driving that effective watering down or where the pressure and lobbying was coming from?

Adrian Wilkes: The most interesting thing about the earlier drafts was the debate around regulation and the role of voluntary agreements, and certainly, from my perspective, “regulation” was perceived as a dirty word despite the fact it is—

Chair: I think Zac Goldsmith is about to pressure you a bit more on this issue.

Q34 Zac Goldsmith: I am. I have one more question before I come to the regulation issue. We are talking about policies and the need for joined-up thinking and so on, and I just wonder whether or not you could elaborate a bit on what existing policies you think need to be beefed up, and how. What are the key policies that need to be strengthened? If there are policies that are not yet on the radar but which should be, in your view, because they are crucial for delivering the green economy, it would be useful to know what you think they are.

Adrian Wilkes: What I will do in due course is supply you with the policy manifesto that we published a couple of months ago. With our 200-odd member companies we look at areas like water pollution control, air pollution control and land remediation, resource efficiency and waste management, carbon management and buildings. There are a few high-profile examples. There is the idea of a framework for low emission zones. Various towns and cities around the country are now thinking of copying what we are doing here in London. It is the same in Europe. We have an opportunity to put in place a framework that gives certainty about how a zone operates and the sorts of standards and how you credit or verify that certain technologies will help the dirty heavy goods vehicle meet good standards. That is an obvious one.

Another great worry of ours concerns the national plans to change the planning system, where they have removed the target for brownfield development. That is going to be very damaging to the parts of our industry that help developers clean up land rather than use greenfields. Again, it is an example of when you look at the future economic picture of Europe and the world, there are supposed to be several hundred thousand contaminated sites in Europe that are...
ultimately going to have to be cleaned up. God knows how many are in China. If we start the task ahead of the game then we create a home market, our companies develop the technologies and the expertise and then you can start selling abroad. There are many, many examples over the last 20 years where countries like Germany and Japan have put this first-mover strategy in place, and America, funnily enough, before the Bush administration, were tackling things like water pollution control and air pollution and land remediation and created a substantial domestic environmental industry.

Frank, you probably have a few other examples as well of policy failures. But I will supply a policy manifesto, which lists a whole range of areas where we just need better policy.

**Frank Price** There was a comment we made a number of times in the run-up to this publication. We know where we need to be in terms of carbon, for instance, in 2050. We need an 80% reduction if you buy into that science, which personally I do. But it is certainly a substantial reduction. Even if it is 50%, it is a substantial reduction, and every part of our economy and way of life and our behaviours needs to be restructured to deliver that. Some months ago there were ideas for a suite of new coal-fired power stations in north London; they have gone off the agenda now. Jonathon Porritt pointed out in a debate that by 2050, if those five power stations had gone ahead, that was all the carbon we could emit in this country. Nothing else. No cars. No manufacturing. No coal-fired power stations, no gas fires at home, nothing, just those five power stations, because they would represent 20% of our 1990 CO2 emissions. A little sort of graphic like that in your mind sets the picture for how we are going to have to restructure our whole economy. It is not just the green economy, it is our whole economy that will be restructured to meet that specific environmental target. The linkage within this document and other parts of policy to that fundamental switch in our culture and our whole community appears to be lacking.

**Andrew Raingold:** I would say there needs to be a green element to all policies, so instead of having a separate thing like the Transition document, green policies should be at the heart of the Government's growth strategy. A good example of this is enterprise zones, because it would not have entailed significant additional funds to incorporate a greening element to enterprise zones, and it is important to have a sustainability vision right at the heart of all policies. The Government has got it right with the Olympics. With the Olympics, sustainability was right up there in terms of price and delivery in terms of what the Government wanted to achieve, and the project has met significant sustainability outcomes generally at no additional cost. It was just the Government asking for what they wanted. That is a key thing to bear in mind. In terms of specific policy, there are three priorities that come through loud and clear from our membership. It is first prices, and in particular carbon prices; secondly, finance, and we have consistently made the case for an ambitious Green Investment Bank to drive the economic recovery; thirdly, consistency in carbon regulation in particular. From the business perspective, there is now a huge range of carbon prices and programmes across the economy and they would like to see these being streamlined with simpler signals, which will make it easier to make a coherent business strategy.

It is not about less ambition; let us be very clear about that. If anything it is more ambition, but we need some kind of streamlining of the existing regulatory landscape because it has become too complicated.

Q35 Zac Goldsmith: My last question, and I am going to merge a few remaining questions, is just to know how important you think regulation is in terms of driving green growth, and whether or not you think there is a risk that some of the good regulations relating to the environment will be threatened or even lost in the red tape challenge. Do you think there is enough—

**Chair:** Can I just say to our three witnesses, I know you could probably speak at great length on this issue, but we do have one eye on the clock, so if I can ask you to be very succinct in your responses to that.

**Adrian Wilkes:** A S Lord Stern acknowledged and has got various financial experts to accept, we are in an area of market failure and that is why the Government has to intervene. Our members, from their own commercial experience, and all the NGOs, would look at the concept of voluntary agreements, which were a major theme in the early drafts of this Transition document, and say they do not usually work. What has achieved environmental quality improvements over the last 20 or 30 years in this country, and in Europe and America and Japan, is regulation and its effective enforcement.

I still do not understand why the Treasury cannot get its head around this concept. It was George Osborne, just before the election, who made a big speech about the Green Investment Bank, which was very welcome. He also made an even more, in my opinion, revolutionary statement about, “Yes, this is a market failure. When I get into Government, I am going to set the Treasury officials to work and internalise the external costs of pollution.” That is my short answer.

I think regulation is absolutely key to delivering the green economy. Our members are very strong supporters of effective regulation, which is normally legal and enforceable and, as Adrian said, voluntary approaches rarely work. In terms of the Red Tape Challenge, I think that does send the wrong signals, but I do not think that will lead to significant deregulatory approach in terms of the environmental agenda because—

Q36 Zac Goldsmith: Why do you believe that? There is a lot of fear among environmentalists and I have had a number of letters from constituents on this issue who are worried about some of the key environmental regulations. Where does your optimism come from?

**Andrew Raingold:** A good question. I think it was a mistake to put the whole of DEFRA’s and DECC’s regulation into the Red Tape Challenge. I think there was a very big backlash almost straight away. Just from what I said earlier, what we need to see is a holistic approach, and that is where the real
opportunities are for simplifying and possibly reducing bureaucracy, but increasing outcomes. I think we are not going to see the removal of the Climate Change Act or the real key environmental regulations. Although there is a lot of that in the media, I think the Secretary of State, Chris Huhne, in particular, was quite defensive on that.

Adrian Wilkes: I am attending the DEFRA Sounding Board on the Red Tape Challenge on Friday, and other than reiterating the point about the fact that if you want to achieve any environmental improvement you have to regulate, I will be pointing out two other things. One is that when Governments talk about red tape, I think everyone is in favour of cutting down the amount of paperwork you have to fill in, but not of cutting away the need to reduce emissions.

Secondly, it is a broader comment but it particularly applies to any concept of anything being deregulated, and that is, let us have a proper impact assessment. Look at all the costs and benefits. Traditionally they look at the costs to the polluting industry and do not think about the wider benefits to our industry, to the wider green economy and to society in terms of health savings, for example.

Frank Price: I share Andrew’s optimism. Mine stems from a sounding board meeting I went to with DEFRA and DECC where officials were adamant that there was not a whole bonfire of the regulations going on in the environmental sector. The other part of my optimism comes from the fact that most of what we are dealing with is European legislation anyway and we cannot get rid of it because it is coming from a different body.

I just to add my voice to the benefit of regulation, back in the 1980s we had a thing called the Auto-Oil Programme, which was led from Brussels, and I sat on many groups and guidance groups for the European Commission, and that has led to the air quality standards that we have now. It has led to the air quality framework directive and the standards that led from that, and the vast investment that has gone into our auto programme, converters, energy efficiency in engines and so on, and we could go on forever.

That was because of a long-term view of the regulatory framework. Back in the mid-1980s, early 1990s, we knew what the standards would be in 2011 in terms of auto emissions, and that long term clarity in the regulatory programme gave industry the ability to invest in a programme in a timely way. Compare that to what is happening with carbon reduction commitment and other aspects of current policy around carbon management in the workplace and within industry and the two are poles apart. One where we have regulatory certainty, which led to investment and delivery through effective-based standards and regulation, and one where we have cut and change and cut and thrust, but dependent on I do not know what.

Chair: That is very helpful, because just as we would like to see a joined-up Government, we would also like to have a joined-up Select Committee, and I think those comments should be read equally to a parallel inquiry in respect of air quality. We need to move on now.

Q37 Mr Spencer: You have mentioned the Treasury quite a lot this morning, and I just wonder if pre-election and post-election reality bit pretty hard because of the size of the black hole and the pressure public finances are under, but ultimately this transition is going to take cash and we do not have the cash in the Treasury. I just wondered how you think Government is performing in encouraging that sort of investment, and is it doing enough to stimulate the investment in the green economy?

Adrian Wilkes: When I supply our members’ policy recommendations, you can see very few that require public expenditure. If you correct market failure and internalise the price of pollution, you then put it back on the polluter and not necessarily on the Chancellor. In terms of stimulating investment, sorry to be boring, but go out there or invite in investors and what will they say? They will say exactly the same as me and my members, because my members are the front people for their investors. The investors invest in companies where there is a certainty about the regulatory framework that is going to drive demand for that company’s solutions.

Andrew Raingold: It is also very clear that there are huge financing gaps for green infrastructure. Ernst & Young have demonstrated that there is a financing gap of £330 billion to £360 billion by 2025, and for that reason the Aldersgate Group supported the introduction of the Green Investment Bank to reduce risks and mobilise finance at scale from institutional investors. I think the update document that was launched in March had some very positive developments, particularly in terms of mandate, structure and priority sectors, but I think one key recommendation, as supported by this Committee, is the borrowing to ensure that the bank is not constrained by not being able to borrow until 2015.

Q38 Mr Spencer: You have mentioned the private sector stepping in, but they need to have confidence, do they not? What can Government do specifically to give confidence to the sector that their cash is going to be so—

Adrian Wilkes: It is the fundamental bedrock of a successful environmental industry, and I suspect for the broader green economy agenda, that a regulatory framework that provides certainty is not chopped and changed. We have seen quite damaging changes to, for example, feed-in tariffs recently. We have seen quite damaging changes to the carbon reduction commitment. We have a likely change to the brownfield remediation target. It is chopping and changing that does not give investors who are obviously the owners of my member companies, the certainty they need. Frank, you are out there at the coalface working for one of our member companies.

Frank Price: Indeed. I support what Adrian has just said. I do not feel that the Treasury has put its hand in its pocket, but the Treasury has to be seen to be signing up to these documents so that we know that there will not be a very heavy fist coming down to stop something happening, which is what happened to CRC. The scheme was pretty much cut off at the knees when it was decided fairly arbitrarily, it appeared, that the money paid into the scheme would...
be taken as a tax by the Treasury and not reinvested in the scheme as it was originally envisaged. I reiterate my point. We need to have the Treasury on board ensuring and committing to the long-term prospective so that investors will be sure that they have a 15 or 20-year timescale in which they can plan their investment and the returns on those investments. **Adrian Wilkes**: Frank has brought up the issue of recycling revenue, and this Committee over a number of years has constantly looked at the Budget and said that the amount of green taxation is unnecessarily or ineffectively low, and there are outside experts, such as the Green Fiscal Commission, I think, recommending quite a dramatic increase in the amount of green taxes.

Of course, if Government is going to intervene and regulate, that can be an emission standard on the tailpipe of a lorry or it can be a tax. If the Treasury—

**Chair**: I think we need to stop there so we can move on.

**Q39 Mr Spencer**: I think we all agree that the private sector is pretty good at adapting and looking for new markets, and while we are in recession they are all looking for new opportunities. If the economy turns around, how big is the danger that those investors then just slip back into high carbon investments and abandon the green economy and go and make, frankly, more cash out of high-carbon industry?

**Adrian Wilkes**: That is dependent on having policy restraints on high carbon, so that might be something like building standards, it might be the CRC or it might be the floor price for carbon. You are right, you have to tackle both sides of the equation.

**Q40 Mr Spencer**: To be clear, today, if we do not change, is that a danger or not? Are you saying that we need to change regulation to stop that happening?

**Adrian Wilkes**: We need stronger controls on carbon, obviously.

**Andrew Raingold**: I agree with Adrian. I think the policy framework is absolutely key, so the more you can do to incentivise this shift and accelerate this shift to the green economy, the less that will be invested in high-carbon assets.

**Q41 Mr Spencer**: Finally, it appears to me that we are behind the game, obviously. If you look around the world, China, Korea and all these other nations are ahead of us. Is that something that should concern us or is that just a statistic not to worry us?

**Frank Price**: I think it should concern us. Some 75% of the legislative assemblies in China are engineering or science graduates, so they understand this issue. They understand the green economy; they understand the carbon issue. As Adrian commented earlier about the amount of oil China will produce in terms of emissions per unit of production, they will be outstripping us very rapidly, and the green economy will be in China and the other BRIC nations if we are not careful. We have to move very quickly to ensure our home markets are secure and that we are not just allowing people to export to our economy to green standards that we have already set.

**Adrian Wilkes**: But China is also a huge opportunity for us. You hear reports that virtually every major river is dead because of badly polluted. Who has the technologies and expertise to clean that up? Some British companies do—although, as I said, we have lost skills because of the economic regulatory policies of Ofwat—and so do companies based in Germany, Holland and France. America has have water treatment companies that have been successful for decades, because they were putting in place strong controls on water pollution in the 1970s.

**Chair**: Sorry, we are just going to have to move on. Simon Wright is going to come in on externalities.

**Q42 Simon Wright**: We have had a number of submissions that refer to the failure to reflect the full environmental costs in prices. On a practical level, how do you see a system that will reflect the full environmental costs into business activities?

**Andrew Raingold**: In terms of carbon costs?

**Simon Wright**: Full environmental impact including carbon costs.

**Andrew Raingold**: In terms of business and starting with carbon, it is very clear that, while a lot of businesses are reporting their carbon emissions, there is a lack of a level playing field, so businesses are reporting to different systems and methodologies, and for that reason, mandatory carbon reporting for all large companies is essential. This will drive transparency and accountability and ensure consumers and the media and—most importantly—investors can make comparisons between different companies. This is a decision that is imminent. The Government have consulted on mandatory carbon reporting quite recently. I think we are expecting a decision in the autumn.

In terms of other areas, biodiversity is obviously another important issue for business, but it is not at the same stage of carbon in the sense that the methodologies have not been developed to the same degree. Businesses are also struggling with what aspects of biodiversity are particularly material to their operations. Having said that, the Aldersgate Group is starting an initiative on this and engaging with businesses to try to develop a framework for how businesses should be addressing biodiversity and ecosystem services, but in that area it is very much the Government who are taking the lead with the announcements made in the Natural Environment White Paper.

**Adrian Wilkes**: I will ask Frank to answer this on the grounds of background and experience, but in conceptual terms there are two ways of internalising costs and those are to regulate and tax the pollution. Behind that decision, of course, you need proper impact assessments to understand the cost of pollution on health, on amenity, on our natural environment and biodiversity, so ultimately you have some economists doing that assessment to put the full facts in front of Ministers.

**Frank Price**: I think the engineering industry, which I come from, does not have a clue how to do it. Some of them will engage with the Carbon Disclosure Project and use DEFRA guidance to put a figure on its carbon emission, its carbon footprint. But the carbon
footprint in the supply chain is very often missed from that, because a company may not be familiar with the scopes of carbon emissions—the first scope is your direct emission, when you burn something in a boiler, for instance. Your second scope is when you buy some electricity and someone else is producing carbon. The third scope is the indirect costs, when you buy a product, so your third scope emission is somebody else’s first and second scopes. Those third scope emissions are not understood within the supply chains of industry to any particular extent. There is a growing group of professional people who are interested in these issues, but it is not understood within industry and it is not understood by the people who try to control the investment or try to regulate the investment within the industry sectors. Regulate is probably the wrong word.

There is a failure to understand how those costs can be internalised, and I do not believe the thinking has happened yet to enable that full understanding to go ahead. Mandatory carbon reporting would be a massive step forward in that, but it is the SME sector that is going to do that for us—as it is the sector that drives initial growth, if you like, in times of emergence from recession—and those people will not have the time to even think about these issues. They will be too busy trying to develop a product, trying to innovate and trying to get something into the marketplace to grow their business. It comes back to Adrian’s point. It is through fiscal and regulatory means that we have to internalise those costs.

Adrian Wilkes: I simply endorse what my colleagues have said about mandatory carbon reporting. In the 1990s the debate was about environmental reporting more generally, and if we were to expand from carbon, I would like to see some resource use reporting or at least the establishment of some resource efficiency benchmarks in major industry sectors in our economy. The concept of doing that is in the IPPC Directive, but the Environment Agency have never implemented that and there has been very little interest in addressing resource use across our economy. We will be pushing that to Ministers over the coming months.

Q43 Simon Wright: In relation to the Natural Environment White Paper, do you think that that goes far enough on some of these issues, and how do you see a set of natural accounts prepared by Government linking into the way businesses report their activities?

Andrew Raingold: I think it is right for Government to take the lead, because this is a social good and there is a role for Government in ensuring that we sustain our natural assets and natural capital, and we also welcome the EU commitment to no net biodiversity loss.

One point I would like to raise in terms of the framework that is set out in the Natural Environment White Paper is that it is not clear what scrutiny there will be in terms of measuring natural capital and if there needs to be some kind of body, in a similar way to the Climate Change Committee, to scrutinise progress. The Government are establishing the Natural Capital Committee but it is not yet clear what role the committee will play.

Frank Price: I will just add on that, there is a lot of work being done within the accounting profession on determining accounting standards for natural capital. I could point you in the direction of that work.

Q44 Simon Wright: That would be helpful, thank you. How can we ensure that UK business competitiveness is not adversely affected by going further than other countries in reflecting environmental costs and the products and services they offer?

Adrian Wilkes: I think we have to firstly take a holistic picture and look at the opportunities here, and those go back to the fact that at the moment it is a £3 trillion worldwide market place. If we follow the policy leaders 5 or 10 years afterwards, which over the last five decades we have done in this country, we will simply be buying in their technologies when we decide to control a particular environmental problem. We have to remember there is an opportunity, if we move fast, but that opportunity is not just for our industry. That is what I welcome about this Government Transition document; that they do realise that the environmental agenda, the resource efficiency agenda, is economy-wide. If we go back to the point that there are going to be substantial resource constraints, the growing world population—and growing standards of living not just in the West but in China, India, South America and, hopefully, Africa—that will mean that demand for those resources is going to balloon, so there will be companies and economies that narrow down the old Factor Four argument. There are arguments that you could have a Factor 10 or even Factor 20. You could dramatically increase resource use efficiency in this country.

That is all about seeing the opportunity and not thinking, “Oh my God, British industry is going to migrate out.” I am going to be rather bold here though. In some areas, particularly in the carbon intensive areas, I think there is a need to look at the idea of some sort of carbon import levy so that our British industries are not at a disadvantage.

I am always wary of companies and industries saying, “We are going to relocate because of the environmental costs of this particular policy or this particular regulation.” For all the time I have been involved in environmental politics for 25 years it has been a constant refrain. It always needs very careful scrutiny.

Andrew Raingold: There is a concern about leakage of economic activity to areas with less stringent environmental policy, but a number of studies have shown this is only a general concern in a very small number of industries and this has to be reflected in the policy framework. It should not reduce the overall ambition, but there will have to be some kind of exemption for a very small amount of energy-intensive industries.

Q45 Peter Aldous: If we can just look at the relationship between Government and business and the dialogue, the Government set up the Green Economy Council to engage in business, and NGOs
have set up their own Green Economy Coalition to lobby Government. Are those vehicles getting the message across to Government, do you think?

Frank Price: No, is the short answer.

Q46 Peter Aldous: Why not?
Frank Price: I had not heard of the Green Economy Coalition until today or yesterday when I was speaking to Adrian. The Green Economy Council is completely opaque. I would imagine that, apart from those people who are members of it, it is not even known about, and if you were not involved directly in this document, you do not even know yet that it has been published. The main audience is the key investors who are going to drive our green economy, and we do not have a list of those people and we are not targeting them.

Andrew Raingold: I should be able to shed some light on this because the Aldersgate Group is a member of both bodies. In terms of the Green Economy Coalition, to start with, that is very much a global organisation and it is looking to influence global policy. So it is not very active in the UK, but it will have, hopefully, an important role in Rio and other international developments.

In terms of the Green Economy Council, the Aldersgate Group very much welcomes the creation of such a body. It is very focused on business and it represents a good cross-sector of the economy. In terms of the improvement it is still very early days. The Council has only met twice. But there could be, I suppose, much clearer objectives and a more active work programme. As a good model, I would suggest the Commission on Environmental Markets and Economic Performance. This was set up about five years ago and was similarly a body of businesses but also had representation from academics and NGOs, and they had a very strong work programme in between the Council meetings.

The Green Economy Council meets four times a year, and what is needed is a very active engagement in between the meetings where the companies can engage with officials to ensure that the objectives of the Council can be met, and also to increase the influence the membership can have on policy development.

Adrian Wilkes: While it is very important that the Government addresses the greening of the whole economy, our perception is that the Council does not have sufficient representation from the environmental solutions industry. Frank was on one of the lower, dare I say it, committees, something called a sounding board. Our industry has the experience of helping, so we need better representation. I am certainly not nominating myself, but industry experts.

Q47 Peter Aldous: Just to move on, it is a concern that Mr Price, who is at the forefront of this, did not know about one of these organisations until yesterday. Would you say it is a concern that the Government Department that is leading on the green economy is DEFRA, which might not have a track record of engaging with businesses?

Andrew Raingold: I think firstly the green economy is a joint initiative by three departments, but you are right, DEFRA has taken the lead and we would suggest that BIS should take the lead because the green economy fundamentally is about business, innovation and skills. It is less, we would say, about the environment and rural affairs, so we would like to see BIS lead on it. Also, we would like to see much more active engagement with the Treasury and other Government departments.

Adrian Wilkes: I would largely endorse that. I think DEFRA has a reputation in Government for punching below their weight because they do not have enough businesses on their side, although they certainly have the environmental industry behind them.

If you look at the history over the last 10 to 15 years, it is reflected by, I think, John Gummer, the minute he left office in 1997, said we should do away with the DTI, or BIS as it is now, because it is such a roadblock to environmental progress, and there is a huge need to ensure that BIS and the Treasury understand this agenda and see its opportunities, rather than seeing it as a cost.

Q48 Peter Aldous: In 14 years, has BIS improved? Is it still a roadblock or do you think it has improved?

Adrian Wilkes: It would be a very rude, crude thing for me to say there are a lot of dinosaurs in there, but they are too close to those problem-holders. Let’s face it, this is a huge challenge for the whole of society, and particularly for the rest of British industry. Really they want to put their head in the sand, as they have for the last 15 to 20 years, and pretend it is not happening. BIS, on the whole, are not proactive enough. Who in BIS sponsors the environmental industry? They sponsor every other industry. We are operating in a £3 trillion marketplace. In this country, we generate GDP of £110 billion and we employ 900,000 people and there is no sponsoring unit in Government to help us. It is incredible.

Q49 Chair: I think our time is up. All three of you have been generous with your time, and we appreciate your written evidence and the fact you have come here this morning, so thank you very much indeed.

Adrian Wilkes: Thank you for inviting us.
Wednesday 23 November 2011

Members present:
Joan Walley (Chair)

Peter Aldous
Martin Caton
Zac Goldsmith
Simon Kirby
Caroline Lucas
Sheryll Murray
Caroline Nokes
Dr Alan Whitehead
Simon Wright

Examination of Witnesses

Witnesses: Dr Gordon Edge, Director of Policy, Renewable UK, Dr John Constable, Director, Renewable Energy Foundation, Dr Alex Bowen, Principal Research Fellow, Grantham Research Institute on Climate Change and the Environment, gave evidence.

Q50 Chair: Welcome to all three of you. As well as giving you a warm welcome this afternoon, we should explain that we are on a very tight schedule and we have a lot of ground to cover. We realise that perhaps we will have to cut short some of the session or some of the answers & facts, that we have regard to that, we might make some real progress. So again, thank you very much indeed for coming along.

Moving straight to the inquiry, we have found in the evidence that we have received that there are quite a lot of different definitions of what is meant by the "green economy." Could I invite each of you to set the session going, by perhaps, in just a couple of sentences, giving us an idea of what you mean by the green economy? Obviously, that is over and above the theoretical definition, which Dr Bowen has sketched, the Brundtland definition; the practical, which is desirable, and then there is the theoretical definition, which Dr Bowen would answer in two ways: firstly, there is the theoretical definition, which Dr Bowen has sketched, the Brundtland definition; the practical definition is what sort of green economy is actually going to result from the current policy sets. So when I write about it, or comment on it, I have the distinction very closely in mind. There is the theoretical, which is desirable, and then there is the actual likelihood, the reality.

Q51 Chair: Can I just press you each a little bit further? None of you has mentioned social issues or the intergenerational aspects, or indeed improved well-being and equality, and I wonder whether or not you would include that in the definition?

Dr Bowen: Shall I go first?

Chair: Please.

Dr Bowen: When I speak about a sustainable economy and sustainable growth, certainly, I have in mind one in which natural resources—in particular, the environment—are treated in a better way. There is more concern for broader aspects of the well-being of society, not simply the measures that one can include in gross domestic product. I would also say in passing that is one aspect that makes it very difficult to put a figure on the green economy, or define it with respect to national income accounts, because as good as they are for some purposes, they do not include measures of welfare associated with a lot of environmental services and benefits.

Q52 Caroline Lucas: On that point, Dr Bowen, I want to get to the heart of the issue. You talk about sustainable growth, and I want to ask you whether you think that it is possible to have infinite growth of natural resources on a planet with a finite number of those resources. If you do think it is possible, is it because you think that efficiency is going to be able to enable 7 or 8 billion people on the planet to live in a way that is compatible with keeping a future for the planet and our future generations?

Dr Bowen: My particular expertise, such as it is, is in climate change economics. There I think the message is that one can halt human-induced climate change without affecting properly measured growth to any great extent. So in one sense, what is possibly the biggest, most urgent environmental challenge can be tackled, while still leaving open the possibility of increased material well-being, particularly in the developing world but also for communities in the industrial world. I do think that the term “sustainable growth” makes sense; it is not an oxymoron. Looking very much further ahead at some other environmental challenges, there are questions that need to be explored a great deal more. A green economy is not just to do with fighting climate change. There are policy tools that can be used to rebalance production and consumption, and in the future I would see growth comprising much more growth in services, knowledge and non-material measures of welfare.

Q53 Sheryll Murray: I would like to explore the benefits and risks of the green economy a little more. What are the main benefits of transitioning to a green economy?

Dr Edge: Looking at it through the prism of the renewable energy industry, we see multiple benefits in terms of value for the money you spend on it. You
have greater stability in your energy prices. You have security because they are home-grown resources. You are able to develop indigenous industry, potentially with an export industry attached. These all come with a price tag that is not dissimilar to what you would have to pay for an alternative future, particularly with gas. So for us it is very much a value-for-money argument; you pay out but you get a big list of benefits in return.

Q54 Sheryll Murray: Do you think these benefits are well understood by Government and the public?

Dr Edge: Across Government they are coming to be well understood, though not necessarily completely across Government. In the public, we have an issue of misinformation, from a number of media outlets and certain commentators, that there is a very high cost to renewables when in fact the average bill-payer is only paying £20 towards the renewables obligation at the moment. That is looking to rise to £50 by 2017, and the new electricity market reform arrangements would reduce the cost you would have to pay on top of it from the renewables obligation. So we do not see this being a major addition to people's bills when there are also the benefits you get, including the suppressive effects on power prices of having a large amount of fixed price renewables.

Q55 Sheryll Murray: What are the pros and cons of moving now rather than later, and are there any examples of other countries moving to a green economy and being able to demonstrate a benefit?

Dr Edge: A benefit of moving now, especially when it comes to something like offshore wind or the wave and tidal industries, is a once-in-a-technology opportunity to establish industry leadership. If we do not do it now, other countries will get that benefit and it will never come to the UK. People will be building factories in Germany and Denmark and other countries, and it will not happen here. So for us the first-mover advantage is very clear for the renewable technologies.

In terms of other countries, I do not know if they have made the whole leap to a green economy but they are certainly making strong inroads to developing their renewable energy industries. You could say that Germany is making a very strong bid for that and its renewable industries. You could say that Germany is making a very strong bid for that and its economic development does not seem to be impacted as a result.

Q56 Zac Goldsmith: A major selling point of the green economy is its capacity for job creation, and my question for all of you, starting with Dr Bowen, is to what extent do you think it will deliver the level of employment that people may be hoping for?

Dr Bowen: I do not think moving towards the green economy is going to pose too many problems for the labour market, but nor do I think the argument for the green economy should rest on counting green jobs. There is an opportunity now, because of high unemployment, to undertake a backlog of labour-intensive activities that could create new jobs. What I am worried about is moving to technologies that appear to be labour intensive and therefore good for creating jobs in the short run, but that then tie you into something that has low labour productivity in the long run. So my answer has to depend on what time horizon you are looking at. We can look for job creation in the next couple of years or so if policies are well designed, but one has to be very careful about supporting inefficient or highly labour-intensive technologies down the road.

Q57 Zac Goldsmith: Are you able to quantify that in any way? From what you are saying, it sounds as if you think there could be an initial burst of activity—a burst of employment—but that as the dust settles and we develop a new form of energy capacity, it will be a slightly different story. Do you have any research that puts numbers to those assumptions?

Dr Bowen: I have not carried out quantitative research on job creation myself. I think once the macro-economic situation has improved, the best first guess of the impact on gross jobs is zero. Overall, employment is determined in the labour market by factors such as the level of wages and the performance of the macro-economy, so in the longer run, if we are able to correct the problems that we see at the moment, it is zero.

Q58 Zac Goldsmith: Is it not logical to assume that a more decentralised energy infrastructure necessarily requires more actors to be involved in it? Take solar, for example; it is not just the manufacture of the product itself, it is the fitting—every rung of the ladder. Logically you would imagine that that is going to be much better, in terms of job creation, than a handful of very large power plants.

Dr Bowen: Indeed, if one looks forward, it is likely that there will be a higher proportion of jobs in renewables, and probably in gas, electricity and water supply in general, and certainly a lot more jobs in ecosystems. But one has to take into account jobs destroyed elsewhere in the economy, and it is important not to forget the labour-intensive jobs in some traditional brown sectors of the economy.

Zac Goldsmith: I am worried about time, so I would like to come to Dr Constable. I know from your submission that costs in other sectors is something that you focused on.

Dr Constable: Yes. You asked whether there were studies that you might refer to for analysis. The European Union has conducted macro-economic modelling that suggests that even on the assumption that the European Union retains a more than 50% share of the renewable technology market worldwide, which I think is a generous assumption, the GDP and jobs benefits in the EU27 overall would be “slight”. That is their word, not mine; a slight benefit.

Q59 Zac Goldsmith: But I think they are still talking about hundreds of thousands, aren't they?

Dr Constable: Yes, but the churn is enormous. You are creating very large numbers of jobs through subsidies in the green sector, but of course those subsidies have to be raised and therefore you are increasing costs elsewhere in the sector.
Q60 Zac Goldsmith: But I believe the research that you are citing is three years old, so my first question is, do you know if it has been updated?
Dr Constable: It has not been updated. The Commission continues to cite it, so I assume that it is—a—

Q61 Zac Goldsmith: The second point is that I think it is also correct to say that they anticipate that there will be a net increase of hundreds of thousands of jobs, taking into account the cost to other sectors.
Dr Constable: Over the EU27 as a whole, but given the transitional risks, you have a very large churn effect, very large sums of money being dispensed in subsidy and the gains are quite small in relation to the risk. The question you asked was about the benefits and risks. Generally speaking, the public is aware of the benefits as they are proposed in the theoretical definition. What they are not aware of are the risks that policies are not able to deliver that aspiration.

Q62 Zac Goldsmith: But I think it is correct to say that there are 119 countries with renewable energy targets as of the moment, according to the House of Commons Library. So 119 countries have targets that are nowhere near meeting, which implies that someone is going to have to help them meet those targets. It is hard to imagine this not stimulating a frenzy of activity that would have a measurable impact in terms of job creation. I just wonder what data—
Dr Constable: Yes. One would have to assume their commitment to those targets was sincere and will actually carry through.
Zac Goldsmith: That is a political issue. But you are not sold. You do not believe that is the case.
Dr Constable: I think the risks are very considerable and the costs are large. Can I just point out that the subsidy costs, in 2020, for the European directed targets here in the UK would be several billion? Our most recent calculations, which we are about to publish, suggest that roughly £8 billion would have to be distributed in subsidies from consumers to renewable electricity generators. That is a very significant amount of money. It also entails integration costs for the grid and of course a VAT uplift.

Q63 Zac Goldsmith: Would you agree that the subsidies for fossil fuels are dramatically higher?
Dr Constable: In the UK that is not the case, I believe.
Zac Goldsmith: Well, globally, but the figures you are using are not just UK-based.
Dr Constable: Of course subsidies globally are of a different kind. There are subsidies from taxpayers to consumers to keep fossil fuel prices low, for example, in Iran and in Venezuela. Subsidies here are subsidies from consumers to generators, so a very different kind of economic approach.

Q64 Zac Goldsmith: Have you analysed the global subsidies? We have had global subsidies—
Dr Constable: I read the IEA work on this part of it, yes.
Zac Goldsmith: You have been down into the details, the subsidies—

Dr Constable: There are indeed direct subsidies to fossil fuel generators but not here in the UK.

Q65 Zac Goldsmith: How much emphasis has your organisation, or have you personally, put on tackling those subsidies of fossil fuels?
Dr Constable: I disapprove of subsidies to any interests in this matter. It would be better if they were not there, but one has to be realistic. Internationally, you would be trying to reduce subsidies that are keeping consumer prices down in some areas, and that would be politically very difficult for those countries to deliver.
Zac Goldsmith: Although I think Iran is now tackling that.
Dr Constable: And one wishes them luck.
Zac Goldsmith: Iran has a very bullish programme to phase out the subsidies.
Dr Constable: Excellent.

Q66 Zac Goldsmith: But on this issue of subsidies, I believe your organisation is enthusiastic about the role of nuclear power, and I just wonder what your view is in relation to subsidies for that sector?
Dr Constable: Well, we are not enthusiastic about the role of nuclear power. We accept that it is quite likely the UK will need a nuclear component. I am not enthusiastic about it; I am more or less resigned to it. I think it is quite a long way off. I do not approve of subsidies to any industrial sector.

Q67 Zac Goldsmith: Do you believe that nuclear can exist without subsidies?
Dr Constable: I am not an expert on the economics of nuclear and could not comment.
Zac Goldsmith: But you would be as opposed to the use of subsidies for nuclear power?
Dr Constable: For market distortions of all kinds, I take a consumer perspective on this matter. Distortions of all kind are not in the consumer interest and I would disapprove of them.
Zac Goldsmith: Dr Edge?
Dr Edge: Yes, I would like to respond to some of those points about subsidy. Incidentally, on my understanding, the analysis that the Renewable Energy Foundation have published does not factor into that calculation.

Q68 Zac Goldsmith: Could I comment on the subsidy? We did take the depression effect into account in our latest calculations. It is very modest, by the way. It is a 10% reduction in subsidy for onshore. So it is a modest reduction. If there are future degressions, well, they
are to be welcomed but I see no sign of them at present.

**Zac Goldsmith:** But the figure that you have used here—

**Dr Constable:** It grew very, very rapidly, deploying between 500 and 600 devices, but a type error was found and that company collapsed overnight. If it had been allowed to grow organically it would have discovered that error much earlier. It would have had a smaller install-based fix and they would not have had to sack 50 people. Now that is the kind of hothouse, over-rapid growth that we need to avoid in the renewable energy sector.

**Dr Edge:** I find it very difficult to believe that companies like Siemens and GE will fall over through over rapid growth. I think this is a very spurious argument that Dr Constable has put forward. How we are going to get cost reductions if we do not deploy at mass scale completely escapes me, and therefore you have to support development into the market against technologies that have been established for up to 100 years. It is very difficult to see how you are going to do that, while you also have the market failure of those technologies not paying the full cost of their external—

**Chair:** I am going to leave it at that for now because we need to move on.

**Q72 Caroline Lucas:** I want to go back to something that Dr Edge was talking about; he mentioned the importance of the UK gaining first-mover advantage, in terms of maximising our introduction of renewables right now. Some people would say that to expect industry in the UK to capture global markets in renewables is not realistic given the cheaper labour costs in places like China. How would you respond to that?

**Dr Edge:** Certainly, with something like offshore wind, one has to bear in mind the very large pieces of equipment that you would have to be shipping halfway round the world. I do not necessarily see the argument for doing that. I do not think the benefits you would get from production in China would outweigh the logistical and transport costs. But bear in mind that what we are talking about is not just the equipment; it is developing a technology lead, an expertise lead, so that the UK becomes the place you want to come if you are going to develop your resources. In the UK, we have expertise, we have technology leadership, we have the kind of intellectual property with which to export to the rest of the world, as well as equipment itself. So being the European hub for manufacture for offshore wind would have...
benefits, but globally we are talking much more about the intellectual exports as well.

Q73 Caroline Lucas: What conditions do we need to foster in this country to become that hub, in your view?

Dr Edge: We need to be really clear that we are going to be the number one market and about the scale of that market, so that companies can say, “Yes, we are going to invest. We can see a five, 10, 15 year horizon of demand for our products that we can also export elsewhere.” It is particularly important that the electricity market reform process gives a good and clear result soon because those companies will be making these decisions in the near future.

Q74 Caroline Lucas: Given that 70% of all solar panels that are installed—even somewhere like Germany that has been ahead of the game on this for a long time—were manufactured in China, what hopes do we have of moving to a position where we could be manufacturing them closer to home and reaping the benefits that would come from that?

Dr Edge: Solar panels are really easy to transport and with the mass benefits of production in China, it is like producing iPods; it is a very similar kind of argument. For heavy electrical engineering, like large offshore wind turbines of several hundred tonnes apiece, it makes much more sense to be capturing and manufacturing those closer to your market in order to park them straight on a delivery vessel and take them to site. It is much more likely that those kinds of technologies will be made closer to where they are needed.

Dr Bowen: There is a danger here in focusing too much on traditional manufacturing. We have all said that the green economy will see pervasive changes, so we should not just focus on narrowly defined sectors that are very obviously in the green economy. Some UK sectors are already doing well by having a lot of green inventions compared with their international competitors. Some data from colleagues of mine at the LSE suggest, for instance, service activities relating to printing, wood products. These are not things that you necessarily think of immediately as part of the transition to the green economy, but they are areas where British firms are doing more green innovation, relative to average, and they are doing relatively well in trade.

Unfortunately the picture is not uniform. For instance, one of our most successful industries, the pharmaceutical industry, has relatively low green patents compared with the pharmaceutical industry in other countries, and it would be good to see them doing more green innovation. We need to look much more widely across the economy. There are opportunities all over the place if we get the incentives right. I do not think anybody yet has mentioned carbon pricing. I think we need that much more than we need subsidies for renewable energy.

Dr Constable: Dr Bowen makes a valuable point about opportunities not necessarily being in heavy manufacturing. I am thinking particularly of integration of renewables into a stable electricity system, which is extremely difficult and at present very expensive. However, the market signals to innovators in the integration sector are very weak, since the integration costs are socialised and therefore nobody has a particular interest in attempting to remedy that problem.

One could look internationally at this problem. I notice that a major energy storage venture in the United States, Beacon, a flywheel company, have gone bust. I do not know the details of Beacon; there may be very good reasons why it did not survive. But it is at least interesting that in an area where renewables are creating additional system costs, and there is genuinely an opportunity to reduce those costs, there is very little activity, and perhaps desocialisation of those costs would provide necessary market savings.

Dr Edge: The idea that there is very little activity in dealing with the variability of wind power is, frankly, laughable. The analysis from the Committee on Climate Change said that even with 65% of our electricity from variable renewables, the additional cost would be 1 penny per kilowatt hour. This is entirely manageable. With the time we have, we will have the ability to bring forward the technical solutions for it, the interconnection, demand side response. These are all things that are in train, and they will happen and will allow us to manage that kind of variability. It is not the show-stopper that the Renewable Energy Foundation would have us believe.

Dr Constable: It is not just us. You could consult work by Mr Gibson, formerly Power Network Director with the National Grid.

Dr Edge: All right—National Grid, who are very much in favour and bringing forward proposals—

Chair: I don’t think you can talk across each other.

Dr Edge: I am sorry. National Grid has consulted and it is very much in line with the operation of the grid, the 20%, 30% variable renewables. It can be done at a reasonable cost.

Dr Constable: But by what date?

Dr Edge: By 2020.

Dr Constable: I draw your attention to work by Mr Gibson, former Power Networks Director at National Grid, recently published by the Institute of Engineering and Shipbuilders in Scotland, suggesting that the overall integration costs for onshore and offshore wind will be between £60 and £65 per megawatt hour.

Chair: It goes without saying that if any of you wish to provide any further written evidence, of course, the Committee will be pleased to accept that, but we must move on.

Q75 Caroline Nokes: Many of us are very conscious, at a time when people are quite financially stressed, of the potential downsides of rising energy bills with the green economy. Are there any other downsides that you think we should be aware of, and have you any suggestions as to how a green economy could be devised that did not require higher energy bills?

Dr Edge: You are going to have higher energy bills whatever you do, because the alternative is to depend on gas imports, and that will increase the prices of energy quite significantly. Certainly what we need to do is also emphasise the efficiency side of this.
keep bills stable we need to use less energy, even though the unit price of that energy will go up, because it will. The benefit of moving to a green economy on this one is that, instead of exporting that price to places like Qatar or Algeria, you are having home-grown energy with home-grown technologies and companies benefiting from that.

Dr Bowen: But one needs to remember that measures to price carbon to make the polluter pay can push down relative prices elsewhere in the economy. So although there may be a rise in the relative real price of energy, it is possible that some other parts of what people spend money on will get cheaper. Nevertheless I think that it is the case that unit prices for electricity will rise, for instance. But there are several suggestions around as to how the impact of that, on low income families in particular, could be mitigated. One possibility, for instance, is using a price index for low income families to uprate benefits. On the whole, low income families do spend a larger proportion of their income on energy. A price index that reflected that would allow benefits to go up when carbon prices or world prices for energy went up. Another possibility—

Q76 Chair: Sorry, can I interrupt?
Dr Bowen: Sure.
Chair: For that to happen who would have to do what?
Dr Bowen: The Government would have to agree to use a different price index to upgrade relevant benefits such as the universal credit when that is introduced. We have had a pensioner price index. There is scope for a wider range of price indices tailored to the relevant benefits that are paid, and of course this is an issue that will need to be addressed anyway when thinking about how to upgrade any revised welfare payments.

I was about to say that another option is to focus very much on the pricing strategies of energy utilities. One possibility that has been raised is requiring utilities to offer lower unit prices for the first slice of energy used, so you are not affecting incentives at the margin that economists worry about—you are still encouraging people to use less energy—but you are giving people a rebate on the first slice of energy that they are using. That is likely to require regulatory intervention because it is not the way that energy utilities currently price.

Dr Constable: The question was whether there are any other risks that are not related to the direct impact. I think one is that the buffering effect in relation to fossils may not realise in quite the way that we wish. I think one is that the buffering effect in relation to any other risks that are not related to the direct impact. It is also a very windy area, as it happens, with enormous variations in wind patterns, and continuous pulses of wind coming across from the Atlantic.

Dr Constable: There is less variation year on year on our measurements of load factor offshore and onshore, so very heavy deployment offshore might produce less variable output year on year. However, the UK is quite a small place so I am afraid that low wind conditions, for example, tend to prevail over the entire area on an annual basis. If it is a low-wind year north of Scotland it is going to be a low-wind year elsewhere in the United Kingdom.

Q77 Dr Whitehead: To explore that point briefly, what effect does the wider spread lateral deployment of renewables have on variables within the particular year? You can have variability within a particular year if you have a relatively narrow base of deployment, but if you have a wider base of deployment in different places or grid connected, for example, between different locations, presumably that variation reduces considerably. Is that right?

Dr Constable: There is less variation year on year on our measurements of load factor offshore and onshore, so very heavy deployment offshore might produce less variable output year on year. However, the UK is quite a small place so I am afraid that low wind conditions, for example, tend to prevail over the entire area on an annual basis. If it is a low-wind year north of Scotland it is going to be a low-wind year elsewhere in the United Kingdom.

Q78 Dr Whitehead: That is meteorologically correct, is it?
Dr Constable: It is a very small area. There will be some—

Dr Whitehead: It is also a very windy area, as it happens, with enormous variations in wind patterns, and continuous pulses of wind coming across from the Atlantic.

Dr Constable: Nevertheless, the observations in 2010, when the wind plant was reasonably distributed, suggest that there will be significant variations from year to year.

Q79 Chair: Whose observations were they?
Dr Constable: They are derived from the Ofgem subsidy claims—the renewables obligation data.

Q80 Dr Whitehead: It has been claimed that the Government’s transition programme, the key policy document on looking at transition to the green economy, takes a passive role. One of the claims suggests that it is about creating conditions for others to develop the green economy rather than in any way looking at the Government role in this. Is that a fair criticism, do you think, of that document?

Dr Edge: My observation about that document is that it is quite slight; it is really a collection of what Government is doing in this area, across the board. There did not seem to me to be an overarching kind of impetus towards a comprehensively green economy. It is just taking slices from Energy and Climate Change, or Defra or wherever, and putting them together. It is a hotchpotch: “Here you go, that’s our transition to a green economy.” I am not seeing a great, overarching mind behind this and a great vision of where it is going.

Dr Whitehead: What do you think, Dr Bowen?

Dr Bowen: I am a little more sympathetic to it and to the general thrust of Government policy, in the following sense. It is important to have clear, credible, long-term goals, and I think the system of carbon budgets in the UK is a very good system. The fact that there is the independent UK Committee on Climate Change is excellent, and I hope the Committee holds the Government’s feet to the fire on achieving the transformation that it wants to achieve. There is
systematic intervention in a lot of areas of the economy where action is needed, with the climate change levy and other forms of carbon prices, and some support for renewables in addition to that.

Where I am a little critical is that I think it is piecemeal, and I do not think that the individual interventions have necessarily been designed as part of an overall piece. Some work that I did for the OECD, for instance, confirmed work that the Institute of Fiscal Studies and others have done that implicit carbon pricing across the economy is all over the place. It is very, very low in some parts; it is very, very high in other parts. It is very difficult to see the rationale for the variations.

I think the Government is pointing in the right direction. It is undertaking a lot of sensible actions. I would like more pervasive but simpler policies, so it is not just do more but it is do things in a more pervasive and consistent way but perhaps with less detail. So, for instance, one carbon price for the economy rather than intervening in lots of different parts of the economy on lots of different pretexts and ending up with a degree of incoherence.

Dr Constable: I very much agree with that. The policies are too numerous; they are conflicting and, as Dr Bowen says, they imply several different prices of carbon. What we need is a policy that is rather more abstract, less intrusive, with less attempt to plan into the future but simply specifying the abstract properties of the energy sector that are desired at some time in the future. You then allow the neural network of the distributed market to find the cheapest routes to those abstract properties. At present the policies reach too deep into the economy although in a rather overlapping and conflicting way.

Dr Edge: I would agree and disagree with that, in that having a clear carbon price would be beneficial but one must bear in mind that the objectives of, for instance, developing the renewable energy industry are not just purely about carbon. There are multiple objectives. Therefore, that could be reflected in additional benefit and additional support in order to bring them forward. So while a coherent carbon price can be a good thing, it should not be the only thing that we have in our policy locker.

Q81 Dr Whitehead: The transition to the green economy programme mentions fiscal measures, including increasing the proportion of environmental taxes. In your view, is that an important part of the extent to which Government might be seen as intervening in the process?

Dr Edge: Given the amount of criticism about environmental levies in power bills, we are not going to go any further with taxes in the power sector to meet these aims. It may be that other forms of environmental taxation might increase—a landfill tax or other similar kinds of measures, who knows?—but when it comes to energy we are not going to have any more measures on top of what we already have.

Q82 Dr Whitehead: The implication is a transfer of taxation from goods to bads, i.e. a proportionate increase in green taxation and an implied decrease in the proportion of taxes in other areas where you wish to stimulate activity in those areas but where you wish to change behaviour in other areas.

Dr Edge: That would be good, but one should bear in mind that the downside of that is if people respond to that taxation message and do less of the bads your taxation income comes down and you have to get it from somewhere else.

Chair: I think Dr Constable wants to come in, and then I will bring in Zac Goldsmith briefly.

Dr Constable: I think it is a good idea to look towards a single tax instrument, but we have to be realistic about the burden placed on the consumer and the likelihood of provoking consumer rebellion. If you wish to have a long-term future for this sector what you do not want are very heavy burdens within the next 10 to 20 years, which might provoke consumer resistance, and at present that is exactly what you have. The consumer burdens are high. Lord Marland gave an answer in the House of Lords recently about the total cost of environmental levies. It was over £12 billion, since 2002, of which about £7 billion was from the renewables obligation. These are set to grow, and I suggest to you that they are of sufficient scale to provoke consumer rebellion and it would be very wise, in the interests of the future of a green economy, to attempt to reduce those burdens very significantly.

Dr Edge: What we would see as increasing burdens on consumers has been the price of gas. £20 for the renewables obligation is not much compared to the massive hundreds of pounds increase that we have seen through the price of gas. I think this is another spurious argument from Dr Constable. We think we have seen a lot of criticism in the press about the impact on bills when the impact on bills is entirely about the price of gas. We should get real about this and realise that going to renewables gets us away from the impact of volatile gas.

Q83 Dr Whitehead: Why do you think the Government is presently rewriting the definition of what a green tax is and moving away from the ONS definition, which is essentially across the whole of Europe and the OECD? Is it to enhance the level of green taxes, do you think?

Chair: Dr Bowen?

Dr Bowen: I have no idea. I would much prefer that Governments stuck to international standards of measurement, and then it is much easier to see what is going on. On the basis of comparable OECD statistics, the UK does not have particularly high environmental taxes. There are one or two areas, like road fuel duty, where we do have very high rates. But across the board we do not use environmental taxes as much as a number of our European friends. I would echo Dr Edge’s point that environmental taxes are designed to try to change behaviour. They have been very successful with, for instance, the landfill levy in this country. The climate change levy has had some good effects, even if its design is not ideal. But good effects mean reduced bad activities.

Nevertheless, there is scope for broader environmental taxation, and I would like to see some of that used to reduce taxes on labour. If one were able to do that, most of the economic modelling suggests that we could get some net job creation. So returning to the
point that was raised earlier, depending on how you run your policy you could end up with net job creation, even in the long run.

Q84 Zac Goldsmith: Dr Constable, relating to the last point you made, we have roughly a £100 billion bill to deal with nuclear waste from the legacy that we have at the moment—the existing waste. We have figures suggesting that $0.5 trillion is spent every year subsidising fossil fuels, and many people think that our foreign policy trips ought to be added to that, since there is almost certainly an oil connection. Why do you think that the consumer backlash, as you described it—the anger—relates to what is in real terms a very, very small fraction of those much larger costs? Why do you think that those smaller costs receive such disproportionate hostility?

Dr Constable: You refer to the subsidies internationally, and again I remind you there are very few here. There is the differential rate of VAT that Dr Bowen mentioned earlier, which applies equally to renewables and to others. There is also red diesel of course. But those subsidies internationally are of a completely different kind, so you are talking here about de-risking investments in the United Kingdom at the consumers’ expense. Those total costs will be very significant. They are already significant. They will be very significant by 2020 and they are an open-ended commitment. Why are people concerned about it? Because they—

Q85 Zac Goldsmith: Just for the record, I want to interrupt you for a second because you are dismissing the concept or the very possibility that we engage in fossil fuel subsidies in this country, but we do in all kinds of ways. We have an Export Credits Guarantee Department, for example—whose name has just been changed, I can’t remember what to—which guarantees many tens of billions of pounds’ worth of investment in fossil fuels, as just one example. Our contribution—

Dr Constable: Overseas.

Zac Goldsmith: Overseas, but this is our money, this is not charity. This is investment to buy, backed up by the British taxpayer in order to maintain dependence on fossil fuels.

Dr Constable: To support industrial interests in the United Kingdom.

Zac Goldsmith: We have contributions also. But these are fossil fuel subsidies. Underwriting investment, de-risking an investment is a fossil fuel subsidy. If you look at all these different subsidies, it just seems to me that the figures that you are quoting—I can’t go into the details, I can’t question these figures in relation to renewable energy subsidies because I haven’t done the maths, but whatever—are a tiny fraction of these much larger subsidies that I am talking about now. I just wonder why it is that you, despite your general opposition to subsidies, reserve some exceptions so that is relatively a very small sector. It makes me wonder where you are coming from and what your organisation exists to do.

Dr Constable: It is not a relatively small sector. The total subsidies to renewables in 2020 will be roughly equivalent to 1% of GDP, and this is not a small sum. The subsidies you mention abroad presumably support industrial interests in this country and manufacturing, so subsidies for those matters. You originally asked why it is that the consumer is concerned about this—

Q86 Simon Wright: The majority of evidence that we have received in this inquiry identifies the lack of a robust, stable, long-term policy landscape as a key barrier to greater private sector investment in the green economy. Do you agree that there is a significant issue here as the costs of transition are so very high? What in your mind, if you do agree with that, are the key elements that need to be included in such a framework that are lacking at the moment?

Chair: Dr Bowen?

Dr Bowen: As I mentioned earlier, in some respects the long-run framework in this country is exemplary and carbon budgets, having an independent Committee on Climate Change that looks into the long term is very good. I think that—

Q87 Chair: Can I just interrupt you there. In the evidence you have given to us you talk about an enhanced role in the Climate Change Committee. Would you include that as part of your answer to Mr Wright?

Dr Bowen: Indeed, I was just about to fly that kite. I used to work at the Bank of England. I was struck by the way in which the bank’s performance, in my view, improved when the discussions between the Chancellor and the Governor were made public and the Bank of England was given a mandate to comment on what the Chancellor did under the previous Conservative Government. When the bank showed its competence after a few years it was given greater powers, and it was given constrained discretion to use the interest rate to meet an inflation target set by the democratic Government. I think that the parallels with climate change are quite close. I think the UK Climate Change Committee has shown its pace; it is very effective. It would be quite helpful for politicians, as well as for the general public, in the achievement of goals if consideration was given to handing the Committee on Climate Change power to use certain simple instruments like, for instance, carbon price floor or feed-in tariff rates in order to achieve budgets for carbon set by the democratically elected Government. It would improve accountability. It would be more difficult to confuse the goals of these instruments with other political objectives. For instance, it would have simplified the debate about road fuel duty if it were clear which component was
supposed to reflect carbon costs and who was fixing that component. It would be great if we had more of a debate about this. I can see some big advantages for politicians and for those who want to hold policymakers to account if all this was done by an agency tasked with a very specific and clear objective, and which did not have to worry about some of the policy trade-offs that the civil service has to worry about.

Dr Edge: The question was about how to create more stability in the sector. Remember, the investors are effectively asking for their investments to be derisked in this area, and that has a cost implication for the consumer. I suggest the costs could be, and are likely to be, very high. That suggests that you have a fragility there, which means that the Government may have to return to it and to revise those mechanisms. Similarly, if the intrusions are complex it is quite likely that they are going to go wrong and they will need revision.

The lessons here are that if you want a stable structure, it has to be quite simple, it should not be intrusive and it should not imply uncertain costs of a high magnitude, otherwise Government will be forced to return to the matter and tinker. I have a lot of sympathy with the current Administration and their attempt to revise the various mechanisms to make them less problematic, but it does show that those intrusions were perhaps arguably misjudged in the first place and perhaps there should have been no such intrusions. Deep intrusions, deep, complex intrusions, with high costs, are going to be inherently fragile and susceptible to revision. You want something simple and you want something that is not intrusive.

Chair: Dr Edge, I think you want to come in briefly.

Dr Edge: Yes. I was going to say that while I agree with Dr Bowen that an overall structure like the Climate Change Act is beneficial, carbon budgets of themselves do not make things happen; you have to have a set of policies beneath it in order to do so. It is really important, particularly in the electricity sector, that we get the market reform arrangements right. That will bring forward the investment we need and which we are long overdue, given that for the last 20 years we have underinvested in our power sector.

Q88 Simon Wright: Are there any other barriers that any of you would like to raise that you have not had a chance to mention so far in this session?

Dr Edge: At the risk of starting something else, the planning system is one that we would need to be addressing very strongly in order to get green places. It is absolutely vital to get that right.

Dr Constable: Yes. I think one unappreciated problem is that the technologies are not actually available. There is a general assumption that the green economy is on the shelf and all we have to do is face the facts, pick it up, take it to the checkout and pay the price, but in fact the box is empty and the label says “Price on application”. The technologies do not yet exist for this kind of transition, so the barrier there is technological unavailability and lack of sophistication, and we have to convince ourselves that the current policies are able to produce technological innovation and development, and there is much doubt over that due to historical experience with Government planned economies, with its general and subsidy programmes in particular. I would suggest that we would stand a better chance of getting a smooth and productive green transition if Government did less planning and faced the fact that the technologies are not there. That would mean probably rescheduling the targets; the targets are unrealistic given the technological sophistication of the sector.

Dr Edges: I would obviously disagree with that. Onshore wind is a very mature technology and we see that, with the right incentives and a clear path, offshore wind will become very clearly mature over the next few years.

Dr Bowen: Although I agree with Dr Constable that detailed, intrusive, very specific interventions may not be helpful, overall, the framework policy should be intrusive enough to get the job done. The problem is that as far as carbon emissions in the UK are concerned, we have relied very heavily on the dash for gas, which was not motivated by climate change policies, by the recession, which of course was not motivated by climate change policies, and by the landfill levy, which was a good move but again, not motivated by climate change policies.

We need to speed up the decarbonisation of the economy; that will require changes in consumption patterns, it will require structural change. The policies have to be intrusive enough to do that, but to maintain public support they should be done in as efficient a way as we can devise, and there I am with Dr Constable. That usually means simple instruments pervasively applied with the minimum of get-out clauses and the minimum of allowance for special pleading from particular consumer or production groups.

Chair: Thank you. There we must leave it because we have a second evidence session. I thank all three of you very much indeed for coming along this afternoon.
Chair: A very warm welcome to all three of you. I know that you sat in on the previous session, so we want to get straight into our questions to you if we may. I am going to bring in Caroline Lucas, first of all, in respect of what we mean by a fair economic system.

Q89 Caroline Lucas: Yes, that is it, really. In our last session, we were talking very much about the green economy as essentially being pretty much about business as usual, albeit powered differently. I would like to ask each of you what your idea of the green economy is, or what it is not. It is clear to me that which encompasses notions of fairness and social justice and also, crucially, environmental limits.

Molly Scott Cato: Thank you, Yes. A lot of the discussion so far has been on technical aspects, and I basically: to think that the green economy is not the same sort of economy powered differently. It is an entirely different structure of economy that is asking different questions, more about the good life and less about how much stuff you have. So I have some quite different suggestions for you as to what a green economy might be.

We have heard quite a lot recently about the idea of living within our means. That is addressed very much in financial terms, but I would like to ask you to consider living within our means in planetary terms, and the fact that the scientific evidence shows that we are not doing that. What a green economy needs us to do is to live successfully within the planet's limits.

I would also like to mention the fact that the enabling the Transition, the document to which obviously the Government is working towards, reads very much like a conversation between business and Government, and very much a small number of large businesses, whereas I think the green economy is much more about empowering people to create the economy themselves and the need to have a mature and grown-up conversation with the people of this country about the kinds of changes that are necessary to achieve the sort of energy limits that climate change requires.

David Powell: Yes. I think a green economy is a sustainable economy and a sustainable economy is a fair economy. It is important to pursue social justice ends, and that should be the bedrock of a green economy. It is of great importance to make the economy that we live in work for people as well as the planet. I did a search in the Government's document, for the words “fair”, “equality” or “justice”, but I do not see any of those things. I don’t get the impression that is in their thinking in what they are presenting us with. The sustainable development definition has fairness at the heart of it. We see Government distancing itself from that. We see the abolition of the Sustainable Development Commission. We see policies, such as the Road Map, presented as growth first—“Let’s try and make it green and anything else we can do is fantastic.” We need fairness at the very heart of what is going on, and that is not just words on the page; it is—as the previous speaker was saying—how the policies roll out in real life and what they mean. If you look at what the Government’s policies are doing to people, then it is the poor bearing the brunt of a lot of Government policies at the moment, so I think we are really quite a way away from that at the moment.

Philip Pearson: I think the answer is to do with the triple bottom line as it is known, the social, environmental and economic benefits of the transition—yes, one planet living. For the TUC, the challenge lies in managing the transition fairly, hence I would support the notion of a just transition as a carbon economy. We would see the principles of a just transition including national and local dialogue between all stakeholders, so there is a sharedness there; and secondly, investment in green jobs. We could define what that means. Green skills are crucial, and respect for labour rights and human rights in that transition. These are part of the complex of rapid economic change in the UK and elsewhere in the past that have failed to deliver benefits for the many, and perhaps those benefits have gone to the few leaving some communities stranded long term. Those transitional challenges are very much at the heart of our thinking.

Q90 Caroline Lucas: Could we get down to the “how”? There is broad agreement that we should try to have a fairer economy, but how do we ensure that economy takes account of planetary limits and addresses the fairness component at the same time?

Molly Scott Cato: The main thing that people are going to see first is the impact of rising energy prices, because they are already seeing it, and I agree with the earlier witnesses that that can only increase. So that offers us great opportunities because we can see ways in which we could create jobs insulating homes. A lot of the green economy developments that we are going to see are not about these high-tech solutions and investing in renewable energy, and so on, but much more about lower scale programmes, insulating people’s homes so that we can stop the 20,000 to 30,000 excess deaths that happen every winter because poor people already cannot afford their fuel bills. We will only see that situation increase unless we take the need for insulation seriously. But the positive side is that it will create a lot more jobs as well, and they are the sort of jobs that cannot go offshore to China because they are insulating people’s homes in Scunthorpe or wherever.

David Powell: To build on that, if you look at something like fuel poverty, which is an incredible crisis in this country—a national scandal, the numbers are going through the roof—there is a real need to put more money into tackling it. The Committee will forgive me because there have been announcements during the course of today about the level of funding for the energy company obligation, and I understand that we are looking at £1.3 billion being available for that. That is less, in absolute and in real terms, than was available for funding for energy efficiency before the subsidy for funding for energy efficiency. We are...
about to have no publicly funded subsidy for energy efficiency for the first time since the 1970s. If a green economy is to take people with it, people need to see the benefits of action as well as just their bills going up, so there has to be social justice hardwired into all these policies. Where you are levying things on bills, make sure that the people who really need the benefits get the benefits first—make sure they are levied fairly, and make sure that social justice is an absolute No. 1 consideration when green policies are being rolled out. I do not always see evidence of that.

**Molly Scott Cato:** We could also go beyond the fairness question as well, and move on to think about well-being. It is 20 years since Richard Douthwaite wrote that really useful book *The Growth Illusion*, in which he identified that the way the economy is growing now, which is obviously one of the major things that needs to change in terms of a green approach to economics, is causing all sorts of negative impacts on society, so there are increases in crime and increases in rates of antisocial behaviour, and people are losing contact with their families and their relationships because of having to work so hard. There are a lot of opportunities in moving towards a green economy where we could enhance people’s well-being and improve relationships and the kinds of things that make people happy, rather than having the sort of economy that is just focused on growth and more material things.

**Philip Pearson:** I would sum it up in terms of managing the distributional, impacts of policy. David has already talked about fuel poverty. Yes, of course, that is a major distributional impact problem now and it is getting worse. The other distributional impact of energy policy has obviously been on the energy-intensive industries, which we may come back to. Last week, didn’t we see the closure of the UK’s last remaining aluminium plant in the north-east? It is a tragedy for industrial policy, in our view. The reasons will no doubt be complex and not only about energy policy, but if we lose plant like that we will not have the wherewithal to develop our own low carbon economy; it is very worrying. Those kinds of distributional issues need very close attention, which is why the TUC strongly believes that there should be much greater stakeholder involvement in this process, otherwise people just become bystanders and victims of policy rather than having a sense of being able to engage in processes and change.

**Q91 Caroline Lucas:** Just one last question. I still want to get more to the heart of how the economy takes account of planetary boundaries. It sounds a nice thing that people say but what does it mean in concrete terms? Presumably, it means less stuff, but then how does that affect the poorest? I want to drill down more into that.

**Molly Scott Cato:** It is important to recognise that there is a connection between the need to respect the limits of the planet, and, therefore, to have some limit on the amount of stuff that is being produced by the economy, and questions of equality. So in the past, well, politicians—not meaning to be rude to those delightful politicians present, but it has been something that has been sold electorally, the promise of giving people more, more material wealth. That has been allowed to be used to sideline questions of distribution because everybody knows that next year they will get more than they had last year, so even though they might have less than the person next door they will still, themselves, have a larger slice of the pie.

But if you start thinking about an economy without growth, the questions of distribution become much more important. So I think it is inevitable that an economy that has stopped growing will also be an economy where issues of social justice come to the fore and need to be addressed through policy directly in a much more active way, rather than people just being offered the chance that the economy will grow and they will get a larger share.

**David Powell:** For the planetary boundaries thing, we do have a policy instrument that is having a go at that, which is the Climate Change Act. That is a working attempt to quantify, limit and reduce an environmental impact—adhere to an environmental limit. It is working, to the extent that we have the Climate Change Committee, we have the debates and we have the reports. The impact that the Climate Change Act has had is huge. There are, of course, significant problems: are we moving quickly enough? Are the budgets that the Climate Change Committee set tough enough? There are all of those things, but the principle is there. I understand there is a lot of work going on in Europe to think about how you might extend that principle to other resources, how we might measure our land use, how we might measure our mineral footprints, those sort of things.

I think that sort of principle is something we need and it has to sit at the very heart of Government. It has to flow through all Government decisions. It cannot just be a box that is ticked. It cannot just be business as usual with a green tinge. We have to have these metrics and these limits at the very heart of Government.

**Q92 Zac Goldsmith:** Can I jump in on that? I wonder what you think about the Natural Environment White Paper, which is an attempt to do exactly that, to try to place a value on ecological systems domestically, with a view to creating a model that can work elsewhere. What would be your view and reaction to that?

**David Powell:** It sounds like a great idea. I also think it is completely absent from the Enabling the Transition document. It is absent from the National Planning Policy Framework. That concept is absent from most other things we see. I guess the absolute first step is to quantify something into value. There are problems with valuing something because if you value it you imply you can sell it, you imply we do not need it, but it is definitely a step in the right direction.

**Q93 Zac Goldsmith:** Is there an alternative direction?

**David Powell:** No. I think it is absolutely correct to quantify and value natural capital and to put that at the heart of the economy.
Q94 Zac Goldsmith: Is that the view of Friends of the Earth?

David Powell: Yes. But quantifying something and giving it an economic benefit helps with policy making. It is a very different thing to say that you can sell a natural asset, that there is a fundamental price that you can pay for them, in order to push the things up the agenda. Just like with climate change, there is a price on a tonne of carbon. You can argue about what that price will be. We would say that price is probably too low but the point is it is there. Without that, you cannot have that debate.

Molly Scott Cato: I am troubled by costing nature. It reduces the value of something that has an inherent spiritual value that cannot be priced. I also agree that reduces the value of something that has an inherent spiritual value that cannot be priced. I also agree that, you cannot have that debate.

Zac Goldsmith: Do you believe it is—? sorry?

Chair: Sorry; I think Sheryll wanted to come in, in respect of the planning framework.

Q95 Sheryll Murray: It was about the Natural Environment White Paper. Have you read both documents and responded taking both into account, because obviously they complement each other?

David Powell: Which two documents?

Q96 Sheryll Murray: You mentioned the National Planning Policy Framework but have you responded to that taking into account the contents of the Natural Environment White Paper?

David Powell: Colleagues have, yes. We can make sure that we send you a note after the event. Colleagues who lead our planning work are fully on top of this.

Q97 Sheryll Murray: They are supposed to complement each other. I just wondered whether you were looking at them as completely separate documents or whether you were looking at them as a whole, as Zac indicated.

Chair: Sorry, Zac, did you want to come back in again?

Zac Goldsmith: That was an interesting question. I would like to ask you a question but you are not on the stand.

Q98 Chair: The issue is about how the Planning Policy Framework syncs with the overall, overarching different policy statements as well, but perhaps that is a discussion for another time. Just to carry on a little bit; you mentioned about an open transition, and I am interested in how you would improve it. One of the things that you said was that, up to now, it seems to have been a conversation between Government and business, and the need for greater engagement would perhaps lead to behaviour change as well. I am interested in how you would take that further forward, and I am particularly interested in the TUC aspects of this because the behaviour change has to apply to jobs in the economy as well.

Philip Pearson: Yes, it does. Enabling the Transition emerged from a completely different document. The Green Economy Council was set up and first met in February this year. It has now met three times; it met last week. The first meeting was due to discuss a draft of the Road Map. I know this because there are 20 members on the council and each of those members has a Sherpa policy adviser in a working group. The TUC has two seats and, therefore, I am on the working group. We saw two drafts of the paper, which does not really look like the paper that was published in August. That is one of the puzzles. The council was beginning to engage itself, it seemed, in developing—I will not use the phrase “active green industrial strategy” but defining more clearly the role of Government with a new Government in place, and looking at the barriers to that transition. The document that was published was a communications document. It was a kind of state of play piece, but it did not really set forward a vision with a time frame for investment, how you would intend to get there and what the targets were. It was very different from the original piece. There was very good intent in Government in creating the Green Economy Council, which is, after all, co-chaired by three Secretaries of State and therefore has high-level Government buy-in. There is still work to be done engaging these stakeholders. There is a gap in the stakeholder membership as there is no NGO representation, so you have business and trade union but no NGO community. Some of that may be reflected in the balance of arguments that are emerging from the council but it is, nevertheless, the right kind of body to set up as a place where stakeholders, at very high level, can have an input. As to managing the process of change, now we are drilling down to workplaces, which I think was something you touched on. Yes, the notion of greening workplaces is a theme that the TUC has been working on for a good number of years now. On our website you can see a number of good examples of joint employee/employer interventions to reduce the carbon footprint—the energy resource use of workplaces. They are a very local version of the stakeholder vision that we have, which we think should be available at a range of levels from the national to the local. There are other community-based initiatives going on round the country, of course. Many of them have been around the feed-in tariff work stream that seems to have ground to a halt, but the process of engagement is one of the main things that this Government can be credited for initiating at high level, but there is clearly much more to be done in this area.

Chair: Did you want to come in on that further?

Molly Scott Cato: I wanted to be a bit rude about that document. Do I have time for that? I just found it not very rigorous or very well supported by evidence. It seemed rather a list of assertions and in the sort of “business as usual” paradigm, as if that was good enough. But I think it needed to justify why this was what moving to a green economy meant and I did not feel it had done that successfully.

Q99 Dr Whitehead: Mr Pearson, was it your understanding that the Green Economy Council was going to be reasonably involved in shaping and securing the document that turned out to be this transition to a green economy document?
Philip Pearson: Yes.

Q100 Dr Whitehead: If you don’t mind me asking, what happened to the material that you referred to that did not turn up in the eventual document?

Philip Pearson: Between the council meeting on 7 June and the publication on 4 August, I don’t know. It emerged as a different document.

Q101 Dr Whitehead: Were you informed on the council as to how that other document arose? Who had informed that and what sort of work had gone into that particular document?

Philip Pearson: I am not a council member. These are questions that perhaps others in Government can better answer than me, because those of us on the working group were puzzled by the morphing from one document to another. There is some mutual text, some shared ideas, but it is not a road map, is it? It is something other than a road map and yet, drafting a road map was the coalition’s intention in the coalition statement on the economy. Clearly, that was an ambition but what we had was more like work in progress, so at the meeting last week the council discussed a forward work programme on a range of issues—skills, procurement, barriers, finance, those kinds of things—which could eventually provide such a road map. If you are looking at barriers, road maps are about barriers and directions, aren’t they? So that could happen still, but what emerged was a little different from what was originally tabled.

David Powell: It is significant, actually, this word “road map”, because that is what we were promised—that is how it was trailed—and I notice it is no longer called a road map. It is now just a selection of things the Government is doing. If you just wanted a document that you could read to work out whether the Government is doing. If you just wanted a document that you could read to work out whether the Government thinks green business is important or not, then I think it does that job. If you wanted a document that would say, “Well, some of the good things the Government has done over the last few years, like the £60 million ports upgrade,” tackling those strategic bottlenecks, are they prepared to do that kind of thing again? Do they take this seriously enough that if they need to pay for it, they will pay for it? I do not get that sense. I agree that I do not get the sense of the sort of sectoral approach—working out what needs to be done to transform the economy sector by sector. As I said earlier, the proof is in the pudding and it is all very well to have a document that talks about green jobs and how important it is to have a green economy, which is right of course. But then you have things happening, such as what is happening with the feed-in tariffs, where one of the very few economic success stories of the last few years and certainly one of the very few green economic success stories is being thrown to the wall to fit an arbitrary budget that was imposed by Treasury, and has been used as an excuse for severely curtail the ambition of the feed-in tariffs. I was an investor looking at that landscape I would take a piece of paper but I would also say, “What is happening in practice?” and I think that is the key.

Q102 Dr Whitehead: Mr Pearson, you mentioned the work programme that is now in front of the council. Would you view it as starting to fill in the gaps across Government, and what might those gaps look like in terms of the extent to which a green economy road map, one might think, has to address all of Government rather than particular areas?

Philip Pearson: Yes. I can probably tell you what the council discussed. I do not think it is clear yet what emerged as conclusions from last week’s council meeting on priorities. So I could list issues that were fairly well discussed, including skills for a low carbon economy; questions of green procurement came up, and barriers to low carbon investment. Of course, the future strategy for energy intensive industries has been a hardy annual on the council, and so it should be. One of the items was labelled Enabling the Transition, which I think referred to further work on that document. That gives you an idea of the priorities that were debated. There must have been others that I cannot recall, but when the minutes emerge that will tell us where this is likely to go.

Q103 Dr Whitehead: This is perhaps a broader question What do you think is the role of fiscal measures, such as changing towards green taxes, i.e. taxing bads rather than goods, not necessarily increasing the overall burden of taxation, but a fiscal switch, which is, in principle, in the transition document? How significant do you think that is in the process or might be in the process?

Molly Scott Cato: Perhaps we could go back to the previous session and talk about your point on moving from taxing things that we quite support like jobs into taxing things that we think are more problematic, like carbon dioxide and so on. Yes that is definitely a move in the right direction, particularly if they can be shown to be fiscally neutral so you do not just have a reaction against that because the burden of taxation is increasing. I would like to suggest that maybe we could think about using land taxes in a similar way because going back to your question about which area of Government policy isn’t being included enough in discussions around the green economy, I would like to highlight land policy and the fact that land often gets left out of these discussions all together, whereas actually it is a key component of the green economy, not only because we are seeking more self-sufficiency in terms of food production but also because land can be used as a very significant carbon dioxide sink through afforestation, but also through particular land management practices that enable the land to hold carbon dioxide more. I think this is something that has been overlooked. It is a way that we can use our economy to work with natural systems, the carbon cycle and the nitrogen cycle, whereas at the moment it tends to conflict with those systems. We might be able to think about using a land value tax together with the planning system in a way which could enable the shift towards more sustainable land use patterns.

David Powell: The idea of shifting the burden of taxation is absolutely spot-on. Friends of the Earth support it. It is the right thing to be doing, and it is really important for the wider issue of how you connect people with the green transition. I think people do not see the benefits—the connection with green taxes. If there were more of a shift, so that
people could see that changing behaviour was a way they could avoid taxation that would be a really good thing.

You asked earlier about the ONS definition versus the Treasury definition; of course, fuel duty is not in the Treasury definition and I would imagine one of the reasons why they do not want it in there is because it makes it harder to keep on cutting it whenever the political heat gets a little bit higher. If you look at what happened with fuel duty, it is an interesting case. The Treasury told us at the time there was no money. They said again, “There’s no money. You can’t have anything else. There’s no money.” Then suddenly it found £10 billion over five years it didn’t know it had, by taxing the oil and gas industry—fantastic. It used every penny of that money to cut fuel duty; not a penny of it went to reversing its cuts to the bus subsidy or helping lower rail prices. So I think we need a really joined-up approach to taxation. We need a fairer tax system, full stop. But I think one in which environmental taxes are transparent—seen—and the money is used for the right purposes would be a hugely bold step towards a fair and green economy.

Molly Scott Cato: If I can go back to my earlier point about a more widespread discussion around these points, I am quite interested in the idea of a carbon floor, which is again not being called a tax, but I am finding it hard to see why that is not a carbon tax and we have the climate change levy, which is again not called a tax. I think maybe these are things that are being sneaked in because politicians are a bit wary of engaging with electorates about these issues, but I think it is absolutely crucial that that happens because we are not going to be able to respond to the ecological crisis or build a green economy unless the people who make up that green economy understand why these policies are being brought forward.

Philip Pearson: Can I just add—

Chair: Very quickly because we are in the last 15 minutes and we are expecting a vote at 4.00 pm.

Philip Pearson: Just very briefly, on shifting the burden, it is more burden than shifting; that is the way we would see it. You have the carbon tax coming in, the ETS revenues, the climate change levy and the carbon reduction commitment, which is now a tax, so where is the redistribution taking place? That is the real problem. It is rather like the introduction of road pricing in Greater London; you had to make sure that you had the alternatives in place first in order to make the pain acceptable. I feel that the management of that tax transition is really quite questionable. It does not make it harder to keep on cutting it whenever the political heat gets a little bit higher. If you look at what happened with fuel duty, it is an interesting case. The Treasury told us at the time there was no money. They said again, “There’s no money. You can’t have anything else. There’s no money.” Then suddenly it found £10 billion over five years it didn’t know it had, by taxing the oil and gas industry—fantastic. It used every penny of that money to cut fuel duty; not a penny of it went to reversing its cuts to the bus subsidy or helping lower rail prices. So I think we need a really joined-up approach to taxation. We need a fairer tax system, full stop. But I think one in which environmental taxes are transparent—seen—and the money is used for the right purposes would be a hugely bold step towards a fair and green economy.

Molly Scott Cato: The hair shirt. I don’t mind at all what it is called a tax. I was just addressing the point raised earlier about whether that was why there was some re-jigging of definitions. No, I don’t mind what it is called as long as it does the job.

Zac Goldsmith: I jumped in at the end.

Chair: Yes, you wanted to talk about local economies.

Q105 Zac Goldsmith: Also to Molly Scott Cato. In the evidence you have submitted, you put a lot of emphasis on self-reliance. Can you expand on that, specifically describing what benefits that would bring?

Molly Scott Cato: Okay. We need to recognise that globalisation has left us rather vulnerable, and we are now living in a very energy-intensive economy where we rely on countries on the other side of the world to produce our most basic goods. Those systems are not only energy intensive; they are also obviously very lengthy. One of the things we know about climate change is that we will be seeing more unpredictable weather patterns, and I do not think this system of distribution of our most basic needs is very reliable. I would give you, as an example, what happened following the Japanese tsunami, where because they have those just in time production systems, suddenly British car plants can no longer function because they cannot get parts that would normally be shipped in from Japan. To me that looks like a very vulnerable system, and I think a more local system of production would make us more resilient.

I would also draw attention to the fact that if you look at a map of the world and see where the world’s ports are, they are all at sea level, yet the first consequence of climate change that we know about is going to be a rise in sea levels of about 5 metres within the next 20 years. How resilient is that system of supply?

Q106 Zac Goldsmith: What do you think are the main barriers preventing that from happening? Is it ideological, is it policy or is it evolutionary market forces? What do you think is preventing that re-localisation?

Molly Scott Cato: There are obviously very strong political forces in favour of a global trade system operating through the World Trade Organisation, and I think we should start to question those on the basis of jobs, but also on the basis of resource security, particularly in terms of food. We should have the courage to question whether that global free trade model is serving us well in terms of our security, as well as in terms of the sustainability of our economy.

Q107 Zac Goldsmith: I agree with you. Do you think it is possible to do that in such a way that it does not trigger an explosion of trade wars between the various countries, and how would you manage that process?

Molly Scott Cato: Part of that issue comes back to land, and giving people access to land so that they have some choices about being able to produce for their own needs. At the moment, even in places like Stroud where I live, where people are very keen to do that and have the skills, it is quite difficult to do that without access to land. I think we will have to challenge those global powers, but we should also...
start from the bottom up at the same time by enabling people to have access to land and actually meet some of their own needs directly, which would build much more sustainable local economies.

**Q108 Zac Goldsmith:** Can you think of any examples where the trend has been bucked, in any particular sector in any particular country, where you see re-localisation of a particular economy or a particular sector as a result of political decisions?

**Molly Scott Cato:** I do not have the data here now but I do know that in the food sector there is a lot more emphasis now on local food production. That is through choice rather than through political activity. I am conducting some research into farmers markets right now across the country. It is a sector that is absolutely thriving and it does seem to me to be bucking the trend towards globalisation anyway.

**Philip Pearson:** You should have a study trip to Cuba maybe.

**David Powell:** What Manchester are doing is very interesting; they have done what a lot of local authorities have done and set themselves a carbon target and looked at it, but they have gone further. They have actually said not just, "What are our Kyoto production emissions in terms of carbon?" but "What is our footprint? Where do we get our things from?" They are actually looking beyond it to try to reduce that. It is early days for that strategy, but the idea of having local leadership in an area, even if you don't have all the land in Manchester to do it, shows you can understand your footprint and seek to reduce it.

**Q109 Sheryll Murray:** Could I look at some issues related to growth, job creation and the green economy? Do you think that the UK exporting goods to capture international markets is consistent with the green economy, and what should the Government be doing to ensure that we can maximise the number of jobs we can create?

**David Powell:** I think it is consistent to have areas we are exporting to, where we genuinely are exporting things that we lead the world in. It is right to have a focus on offshore wind, which is something that the UK does, carbon financing and all the things that we have a lot of experience in. I think that is absolutely appropriate.

Going back to the earlier session, I do not think we are ever going to keep up with China in making solar panels, but I do think there are things where the UK has the advantage and where we are an attractive place to invest and we should use that.

**Q110 Sheryll Murray:** I said exporting goods, so I wasn't just talking about green-related industry but other goods as well. Do you think it is right that we should be exporting goods to capture international markets? Do you think it is consistent with a green economy?

**David Powell:** Clearly there is a tension there, isn't there, because it is daft that we ship apples to other countries and then buy apples back in again, for example, with the embedded transport costs of that. That sort of thing does not seem to me a particularly good use of anyone's time, particularly not in the sense of environmental limits. Exporting technology is one thing. I think Molly will have a lot more to say about limits to self-sustainability.

**Molly Scott Cato:** I feel I have said it already. I do think it is much more important to produce at home and I think we should start asking questions and assess the benefits of trade, in terms of their environmental impact rather than just the economic gains in the sense of higher profits. There are other economic gains in terms of job creation, skilled jobs and people having a sense of meaningful identities within their home communities, which will be brought if we have a regeneration model based on local production as opposed to global trade. I think the export-led growth model is incompatible with a green economy.

**Q111 Sheryll Murray:** Could I ask you to expand a little bit? How do we ensure that areas of the country that rely on energy-intensive or resource-intensive industries are not adversely affected by the transition to a green economy? I recently joined the Chairman on a visit to Johnson Tiles, for instance. Ceramics is quite an energy-intensive industry and they have made moves towards cutting back on the energy they consume, but are those industries being adversely affected or do you believe they are?

**Molly Scott Cato:** They are being adversely affected. One of the things that we must face up to about the transition to the green economy is that energy-intensive industries are going to face difficulties. But what I would suggest is that we go through some kind of transition process, where we focus on these industries and we encourage them to move into developing in a way that is no longer so energy intensive. So, for example, obviously bricks are a highly energy-intensive way of building houses, so if you have a brickworks it is going to suffer from this kind of carbon pricing but, on the other hand, if you were building houses using wood then you are sequestering energy in that wood. So you could still have a construction industry; it is just one that is going to be relying on different kinds of products for building the houses. It is one of the conversations that we need to be had, as I repeated previously. We need to engage with people and explain to them that there are reasons why we are having to make these changes, whereas if it is just a discussion that happens between the people who run the brickworks and the politicians, and all the people on the ground see is that they are losing their jobs, then you are obviously going to have a very negative reaction.

**Q112 Sheryll Murray:** Do you think that could result in us losing some skills as well?

**Molly Scott Cato:** We will lose skills but we will gain other skills, because in a more localised economy, based around more self-provisioning, people will develop different kinds of skills and, in many cases, higher-level skills, I think.

**Q113 Chair:** I am conscious of the time. The TUC has been working on this, so I would like to bring in Mr Pearson and then I will move to Caroline Nokes.

**Philip Pearson:** Just very briefly, Chair. Yes; indeed; we have been working with the energy intensive...
users’ group, which is the industry body that represents steel, brick making, cement, glass and ceramics, of course—you visited Johnson Tiles. The way we have addressed this issue, where the serious challenge is carbon leakage—is through an evidence-based approach where we have jointly studied the energy cost burdens on these companies, because otherwise there is a lot of special pleading you need to get beneath. Secondly, the study we published in July 2011 was about technology innovation: what kind of technology investments are taking place and are needed? In both areas, there clearly is a huge need for Government leadership and support to develop a low-carbon industrial strategy that would secure the place of these core industries in a low-carbon economy—therefore, jobs—and, therefore, secure the skills; indeed with the new technologies that are emerging, it would improve and strengthen the skills base. It then would address the issue about exporting carbon.

I was fascinated by your question about exporting goods in the low carbon economy because, of course, that is part of the problem, but the UK is a net exporter of carbon, not goods I would have thought. Don’t we export 8% more than our carbon footprint because of the goods we import from China? But getting the package right for the energy-intensive industries is currently possibly the single most important issue that the TUC and those industries are vexed by, and we are looking forward to what is in the autumn statement. There may well be an announcement on this problem, but I think we would see that—

**Chair:** Mr Powell, can I just have one sentence and then I am going to bring in Caroline Nokes.

**David Powell:** Yes. I was going to say there is a big difference between rising energy costs and rising climate costs and there is a real danger at the energy-intensive industry level, for small business, for everybody. There is a media culture about putting the blame on to climate policies. For energy-intensive industries, climate policies are about 5% of their costs and at the moment that is not going up or down. Energy prices are the things that are going through the roof. That is fossil fuel prices. They are the things that are going up. What can’t happen is energy-intensive industries effectively opting out of a carbon tax regime that has not even started yet, purely by pointing the finger at the very small climate component of what is a massive problem for industry in general, rising energy costs, international competition and a lack of stability, a lack of joined up approach.

**Chair:** We have heard from the TUC of the attempts to put transitional policies in place.

**Philip Pearson:** You have heard from us. We wrote about that in our evidence.

**Molly Scott Cato:** Could I very quickly also suggest my ecological enterprise zone, which I included in my submission? One of the things, in terms of this conversion, that we need to do is to think experimentally, and it would suggest allowing some areas to adopt different kinds of policies and have particular financial support from Government, on the basis that they would commit to very significant carbon reductions. So you could basically trial various things in different areas where you are currently relying on very energy-intensive industries.

Q114 **Caroline Nokes:** This is going straight back to Mr Pearson about a potential skills gap and the different skills that are required in building a green economy; you have already mentioned some of that. What I specifically wanted to ask is, do you see it as important that it be the Government that leads training providers and further education colleges to make sure that the skills are there, or is it okay to trundle along with companies dictating to colleges what they want?

**Philip Pearson:** In the Low Carbon Skills Challenge, which is the Government’s publication, if you look at the stakeholder responses it points to two or three things. There is concern about the employer-led, demand-led approach, particularly when you have fast-growing industries like renewables that do not have the capacity to train up an expanding workforce; they can only train with their own resources. It is a classic case of where the demand-led approach does not work, where employers in RenewableUK studies are short of very skilled labour. The STEM skills are the core problem. We need to develop pathways to promote skills—science, technology, engineering and maths; pathways to STEM skills and jobs with STEM skills. That is the core problem and that is not unique to the green economy. It is an important problem and we would see Government needing to step up here to lead. We have called for a taskforce on this issue. The Green Economy Council may indeed set up a task group on that, and we very much hope it does—it may be ministerial-led—to look at the strengths and weaknesses of the current model and what needs to be done to ensure we have the skilled work force anticipated, planned for, and trained, probably borrowing from lessons in other countries, like Germany.

Q115 **Caroline Nokes:** To what extent do you feel that the skills gap is providing a barrier to the green economy?

**Philip Pearson:** You will get answers to that question from a range of industries and they would all say, in different ways, there are skills at different levels that present barriers.

**Chair:** Thank you all for coming along and giving evidence this afternoon.
Wednesday 14 December 2011

Members present:

Joan Walley (Chair)

Peter Aldous
Neil Carmichael
Mark Lazarowicz
Caroline Lucas
Sheryll Murray

Caroline Nokes
Mr Mark Spencer
Paul Uppal
Simon Wright

Examination of Witnesses

Witnesses: Janice Munday, Director, Advanced Manufacturing and Services, Department for Business, Innovation and Skills, Steven Fries, Chief Economist, Department of Energy and Climate Change, Mallika Ishwaran, Chief Economist, Department for Environment, Food and Rural Affairs, Andrew Lawrence, Director, Strategy and Sustainability, Department for Environment, Food and Rural Affairs, and Peter Schofield, Director, Enterprise and Growth, HM Treasury, gave evidence.

Q116 Chair: Thank you to all of you for coming along. There are rather a lot of you, so I hope we will be able to get through our proceedings in time for the members of the Committee to leave for Prime Minister’s Question Time. If I can start off, we want to try and get an idea of how the whole issue of the green economy is being looked at across different government departments. I think we wanted to start off by really trying to understand what enabling the transition to a green economy seeks to achieve and just to set out how you think businesses would use it and what relevance it has to businesses. Do you know who wants to take the lead on this?

Andrew Lawrence: Thank you. Perhaps I should take that one as I was the senior responsible owner of the overall transition plan, so perhaps I will start with that. In terms of what it was designed to achieve, I think it is probably best explained through some of the feedback we are getting from business stakeholders but other stakeholders as well. I think they were asking government five questions. One is, “What do you mean by green economy? What is your vision? What do you think it will be?” The second, “Can you put all the information in a single place because clearly there are lots of departments involved and it would be helpful to have the information in a single document.” The third question they are asking us, I would say, was, “Can you give us as much clarity as possible about what lies ahead, what the forward plan is?” The fourth was, “What might it mean for us?” What does the transition to a green economy mean? What might the implications be for us?” Then, finally, I think there was a question about partnership, “How do we work together? What will Government do? What will business do?” I would say those five questions were the ones for us to address and I think the document aims to tackle them. We hope, given the feedback we are getting from business stakeholders, but you need to take decisions as government and work with businesses in the light of the best available information.

Q117 Chair: I think some people would say that all it has done is just set out existing government policies and I think our question back to the other departments is how it has brought added value to the work that has been done within the business plans of the other departments, having had what is almost a communications document setting out what is meant by it.

Janice Munday: Well, going back to what Andrew said, business has made the point to us that finding all of these policies and seeing them together was quite difficult when looking through the business plans. The timeline that we set out in the document, which sets out how all of these things fit together, when businesses can expect to see things, has been hailed by business as one of the most significant things that government has produced to give business that clarity. It is something that is very much aimed as a tool so that business can interact with us more easily on the whole green economy agenda.

Chair: Caroline, you wanted to come in.

Q118 Caroline Lucas: There is lots of language about the green economy, growing sustainably and so forth, and I think the purpose of this inquiry is to try and get to the heart of what some of those words really mean. For example, some of the people who have given evidence would say that on a planet of finite resources the idea that you can go on growing indefinitely, using ever more finite resources, with more and more production and consumption, is not actually sustainable. I want to know where your position is on that. In your evidence from the three departments, you write, “Our vision is that our green economy of the future will grow sustainably”. Even if you are using resources more efficiently, how do you propose to go on growing indefinitely on a planet of finite resources?

Andrew Lawrence: Yes, in terms of vision I think you are right—four aspects in the opening sections of the document set out what we think the vision is. Growing sustainably for the long term is one of them, as well as using natural resources efficiently, which is vital to the description you just made, and being more resilient and exploiting comparative advantages. Those are the overall objectives. Overall, in the document we try to understand better the value and the availability of natural resources. I do not know whether Mallika will want to say something about this from the economist group, but you need to take decisions as government and work with businesses in the light of the best available information.
Understanding resources, their value and their impact when implementing Government decision making is the key answer to meeting the vision.

Q119 Caroline Lucas: With respect, that does not actually get down to the issue of whether or not you see the economy as a subset of the wider ecology or whether you think that, with a bit more resource efficiency, we can go on growing. That is the rub of what I want to get at. Some of the people who have given evidence from, if you like, a more dark room perspective would say that Enabling the Transition to a Green Economy is about business as usual with a few green bits of window dressing. What I want to get to is the heart of the philosophy that underlies that.

Andrew Lawrence: Well, I do not think it is business as usual. There are things there that are quite radical and quite ambitious in changing the way in which Government works, the economy operates, businesses behave and consumers as well. I think it is not a "business as usual" type document. I think it is challenging on the basis of new evidence and new insights to encourage you to talk about the interconnection between growth and the availability of resource and so forth because I know you have worked on that?

Q120 Chair: Just before I bring in Ms Ishwaran, was there any discussion about this at the time when you were formulating these proposals? Were there specific papers relating to this and the issues that Caroline Lucas has just raised?

Andrew Lawrence: Principally through the work of the economists, I suppose.

Mallika Ishwaran: Yes, Defra has published papers on the links between the economy and environment, and the specific nature and evidence of those links. This informed the Enabling the Transition to a Green Economy (or ETGE) document that was produced. We looked in detail at what green growth means from an economist’s perspective. Valuing natural resources correctly was a key element of that. Resource efficiency is a win-win in the near term which the ETGE document picked up on, but we also looked more broadly at valuing resources that do not have a market price, for instance, and at how to get businesses and others to consume natural resources in a way that reflected the scarcity of that resource. We also considered whether some natural assets which are highly valued have limits or thresholds, which mean that even though individual consumption decisions may be right, there could still be unpredictable cumulative impacts somewhere down the road. We looked at both concepts in the context of the ETGE and asked what direction we wanted to give business based on the economic evidence.

The idea of setting out the Government’s vision and a policy framework for the transition to a green economy was also to encourage private investment, particularly in green R&D, where there might be under-investment as a result of the lack of accurate pricing, i.e., because such investments are valued socially but not in the market. Private investment and innovation is key to improving resource efficiency and overall productivity of the economy.

This was some of the argumentation that we went through to judge and decide how best to deliver in a resource constrained and prosperous economy.

Caroline Lucas: I do not want to take too much time, so just to say that I still think that there is an intellectual flaw there, if you like, that even if you are using resources more efficiently, even if you are valuing them—and I take the point exactly that many natural resources do not have a financial value—even if you are doing that, if overall the economy is based on more and more growth, then ultimately there is going to come a point where we are exceeding massively what the planet can provide. That kind of broader framework does not seem to be reflected in the document, but I will not take up further time, Chair.

Q121 Chair: I am just conscious of time. As I understand it, it was not published with a huge amount of publicity. It was tucked away on a Business Link website somewhere. How do you expect this joined-up document and policy to be brought to the attention of every business all the way around the country?

Andrew Lawrence: Shall I start? I do not think it was tucked away. We launched it in what I would say is a pretty normal way, and it was on the website of the three Departments—it was in the Defra business plan but it was published as a joint Defra/BIS/DECC document. It was launched on the departments’ websites. The Secretaries of State wrote a joint letter to people who had been involved saying, “Here is where it is. Thank you for your help. Do please go and have a look”. It was put on Business Link, which was, according to the feedback we were getting, the place that businesses and others were most likely to look to try and find it. Then we had a larger event a couple of months ago—well, maybe it was early last month, actually—with the Aldersgate Group and NGOs and other business stakeholders to give it a bit of prominence and a bit of profile, which was well attended. I think the overall view was quite positive. I think it was—

Q122 Chair: How are you monitoring the kind of feedback that you have had?

Andrew Lawrence: We get it almost constantly. We also look at what is happening. We have had quite good feedback throughout the process because we have consulted a lot of business and other stakeholders who generally said, “This is a good idea and a useful idea and we support it” so we were encouraged by that. On the announcement itself, it was welcomed by a number of people. One or two, admittedly, said, “Could it go a bit further? Could it have said a bit more?” which is fair enough. Since then, we see that it has been picked up. For example—it is in my mind because it took place on Monday—there was a joint CBI/Green Alliance event where they referred to this document as one of the positioning statements for their overall conference, which is a circular economy. We also have the Green Economy Council, of course, which helped us.
Q123 Chair: Could I just ask as well what difference it has made to the Treasury?

Peter Schofield: I think one of the key points about this document is it brings together in one place all the different measures that every part of Government is taking forward, and the Treasury has its role within that as well. You only need to look at the way that The Plan for Growth, for example— which was published jointly with BIS alongside the Budget— referred to the need to take action now to put the whole economy on a low carbon, resource efficient path that maintains UK competitiveness, which lays the foundations for strong and sustainable growth in the future, and referred to the opportunities of green growth to see that this is at the heart of the overall growth agenda.

Q124 Chair: I am just interested in how that is being done. For example, one of our separate inquiries, which involves DECC and the Treasury, is looking at the feed-in tariffs. Now, for example, would a joint statement and policy by you result in greater dialogue, understanding and two-way communications between, say, Treasury and DECC in relation to, for example— I think it is a good example of the way in which the appraisal was done of the review of the feed-in tariffs?

Peter Schofield: I know that the Committee took quite a lot of evidence on this last week.

Q125 Chair: Sure, but I am asking you how this joined-up approach across Government impacted on the way in which you jointly, through DECC and the Treasury, set out the review of FITs.

Peter Schofield: Well, the context of all of this is that the appraisals are done through the Green Book rules—the Treasury has these on its website and leads on that, but the various different annexes are jointly agreed with other Government Departments. That is all on the Treasury website. In terms of what difference it makes, the Budget measures alongside The Plan for Growth included things like the introduction of a carbon price floor. It included £3 billion of capitalisation for the Green Investment Bank. This does turn into some pretty significant policy measures.

Q126 Chair: Do you want to add to that, Mr Fries?

Steven Fries: Yes. I think the value of the document is that it sets the energy and climate change challenges that we face in a broader context of sustainable development and resource scarcity and identifies the relationships between them. I think the document also is important in emphasising the importance of cost efficiency in your approach to meeting your energy and climate objectives and, more broadly, your sustainability objectives. That issue very much informed our approach to the review of FITs.

Q127 Simon Wright: Some of our witnesses have suggested that in Enabling the Transition to a Green Economy the Government is adopting a rather passive approach rather than requiring businesses to do anything differently. Is this an approach that will really ensure that the green economy does happen and does develop as we know it needs to?

Andrew Lawrence: I would not say it is necessarily passive, but I think the document tries to be very clear on different roles. Part of that is saying that the green economy is not entirely for Government to achieve and deliver. In the introductory section, the Secretaries of State described it as, “The commitments in this document demonstrate a shared responsibility to take action” and that indicates that what they had in mind for this document was to show what Government will do and then to encourage businesses and consumers and other stakeholders to respond, if you like. I do not think it is passive, I think it is a call to action. Even on the 11th page of the overall document it says, “Here is what Government will do”, about 10 or 12 actions that Government will take, and then on the other side it says, “Business should lead”. Now, we did end up in a bit of a mess saying, “Business will” because clearly that is their decision, but we set out what we thought businesses could do in response as well. I think it is quite a call to action rather than a passive document.

Q128 Simon Wright: What will happen, however, if that call to action is not responded to? What is next in the strategy?

Janice Munday: Perhaps I could pick this up because I think there is an important element in this picture that is being taken forward now, which is the work we are doing intensively within sectors of the economy about what the particular issues are for them in making this transition. Within the Department for Business, Innovation and Skills we have a number of councils or bodies where we interact with senior business leaders on a range of issues. We have the Green Economy Council, which perhaps we will come back to, which is something that is shared responsibility across these Departments. We also have bodies like the Automotive Council, which is looking at decarbonising the transport system, where a huge amount of work is going on by industry with Government about the implications and the actual way we design, build and operate road transport in the system. We have the Aerospace Leadership Group, which is looking again at the whole question of noise, not just emissions, from aircraft engines and what the next generation of aircraft will be like. We have the Green Construction Board, which has the ambition to adopt completely the transition to the green economy in the construction industry—a difficult industry to deal with. The board is giving a guiding vision on that and taking forward the implementation of the Government’s low-carbon construction strategy. We take the strategy forward with particular industries, responding to the needs of those industries.

Q129 Simon Wright: To many it would seem that the transition to a green economy is actually in the interest of businesses. Using resources more efficiently should, you would imagine, cut costs overall. So why aren’t more businesses engaging in this approach already?

Janice Munday: From our experience, a large majority of businesses are engaging in this. We know some businesses are actively looking at how they provide environmental reporting. We know the chemicals industry is the most environmentally
efficient industry in the UK compared with that anywhere else in the world. As I say, innovative work is going on with the automotive industry to try different things, for example, there was the recent announcement of some work on hydrogen fuel cells. There is a huge amount of innovation and a desire to engage with this agenda from business.

Andrew Lawrence: If I could just add that there are a lot of examples and we tried to include as many case studies and examples in here as we can, particularly of, as you say, companies who are saving money and saving resources, which is the win-win that we are trying to push for. Clearly, it is not a universal action from businesses, though, so we try also to encourage them. I think the two main issues I would point to are, first, publishing research on the benefits of resource efficiency. We hope that the headline figure of £23 billion available to British industry if they were to adopt quite simple, within one year payback measures to increase their resource efficiency will be a flashing light for business to think, “This is something we should take seriously. There is a lot of money to be made about”. The second thing I would highlight is the Ecosystem Markets Task Force that was set up, which essentially tries to encourage businesses to think quite innovatively and creatively about how you can do things, how you can make the most of the opportunities. That has now been established under Ian Cheshire. It is reporting to the Green Economy Council just to show people the sense of the possible and to encourage action. I think there are things we are doing, if you like, to push as well rather than to accept—

Q130 Mark Lazarowicz: I was struck by Ms Munday’s comments about a large majority of businesses being involved in the transition to a green economy. What do you mean by a large majority, 70%, 80%?

Janice Munday: The answer, as always, is difficult when you take the whole economy as opposed to particular sectors. From my perspective, we deal with the issues and the problems for sectors. I would say from our interaction with the top prime companies in all sectors that it is highly improbable to have a conversation without discussing the transition to a green economy. It is one of the No.1 things that those companies raise with me and my colleagues and with Ministers in this Department, and we talk about the issues. This is not something that has passed business by.

When we come to look at what is obviously vast numerical numbers and talk about engaging the SME community, that is always a more difficult task. Inevitably, when their concentration is on cash flow it is quite difficult to engage them, which is why Andrew Lawrence referred to making a pitch to those businesses about how their cash flow could be helped by adopting relatively easy resource efficiency measures.

Q131 Mark Lazarowicz: This is more kind of an impression you have of business rather than any kind of systematic measuring of how far they are involved in taking organised steps to transit to a green economy? Maybe that is all you can do. I am not necessarily criticising you, I am just trying to be clear that this is more an impression rather than an actual analysis.

Janice Munday: Perhaps Steven Fries could pick up on the Carbon Plan.

Steven Fries: Well, the Carbon Plan sets out clear roadmaps for improved energy efficiency in a range of sectors in particular—transport and buildings and structures—as well as the power sector. But the transport and commercial sectors and structures are a clear area where progress can be made, particularly in terms of improving the efficiency of buildings. We have a number of programmes in train and in effect to improve efficiency in this sector. In our recently issued Carbon Plan this was one of the key pathways to achieving our energy and climate objectives over the next four carbon budgets.

Q132 Neil Carmichael: I was listening carefully to Janice about what BIS was doing. I was just wondering what role incentivising consumers will play in encouraging manufacturers to develop more green products. I am thinking of the example of the £5,000 for electric cars for next year. We do need to explore that area and perhaps enhance it if you think it is an appropriate direction of policy.

Janice Munday: The Government has a number of instruments within which it deals. The £5,000 for electric vehicles is a large sum but it is not the only sum, and perhaps Mr Fries can talk about the Green Deal in a moment. Again, I would say in our interactions, for example, with the retail sector and with the construction sector, which is most interfacing with consumers, that we talk all the time about ways in which they can market green economy goods and services to consumers using their considerable knowledge of consumer behaviour. We are working very closely on that.

Q133 Chair: Further to that, then, can we expect an announcement very soon that the Government is going to be looking towards mandatory reporting of greenhouse gas emissions in order to get that labelling and understanding in terms of purchasing requirements?

Andrew Lawrence: There will be an announcement of a decision soon. I do not know what the decision will be at this stage because the Government is still considering the responses to the consultation that it held earlier this year.

Q134 Chair: But have your discussions been cross-party in how to arrive at a decision on that?

Andrew Lawrence: Yes, the discussions about the decision, the evidence and the extra evidence from the consultations are being collected across pretty much all the Departments here.

Q135 Caroline Nokes: I just want to take Ms Munday back to her comments about interaction with companies and the vast majority of them engaging on the transition to the green economy. I think you specifically said that with the majority of top companies it was impossible to have a conversation
with them without this engagement occurring. Would that be in a positive or a negative way? 

**Janice Munday:** It depends, as ever, on the sectors. We may get on to the package of measures to support the energy-intensive industry sector. They have been very concerned about the rising cost of electricity, but despite that, they want to engage with us. They raise questions about what we could do with waste gases, could we capture this, could we do that, what is happening on carbon capture and storage? It is a positive discussion about mechanisms.

**Q136 Paul Uppal:** Briefly, I just want to get the panel's view on a more broader based thing. I was in India recently, where there is a great appetite to capitalise on green technologies. In terms of the Enabling the Transition to a Green Economy report generally and the balance between our domestic consumption and the international perspective on this, I picked up from the trip abroad that a lot of businesses have an appetite to capture green technology and to learn from best practice as well. Do you think that avenue could have been better explored in perhaps encouraging businesses to adopt a more green mantle?

**Chair:** Who wants to answer?

**Janice Munday:** Well, if we are talking about internationally, obviously UK Trade & Investment has a strong team dealing with low carbon and green economy themes and it looks for opportunities for British business to sell their goods, service, products, technologies and knowledge in other overseas markets. We put a lot of effort across the UKTI to promote and sell those products overseas.

**Steven Fries:** Yes, and also we share best practice not only on successes within the private sector but also in policy. We have a dialogue with our Indian counterparts on policy approaches that also helps to facilitate a private sector response to these challenges.

**Q137 Mr Spencer:** You made reference to energy-intensive industries and obviously we are trying to move to a position where the whole economy is green. I just wonder what the Government is doing to try and assist those energy-intensive industries to make the move.

**Janice Munday:** The Government is absolutely committed to the fact that energy-intensive industries have a strong role to play in the transition to a green economy. We need steel in order to build the wind economy. We need steel in order to build the wind power generation sector. We need steel in order to build the steel tower structures. We need steel in order to build the steel ancillary parts for wind power generation. We need a strong role to play in the transition to a green economy. We need steel in order to build the steel tower structures. We need steel in order to build the steel ancillary parts for wind power generation. We need a strong role to play in the transition to a green economy.

**Janice Munday:** Yes, that is a clear priority for the Government and for DECC, and we are working to advance the CCS demonstration initiatives of the Government. Work in this area will be coming forward in the new year.

**Q140 Chair:** What has happened to the carbon capture and storage project for this year?

**Peter Schofield:** Sorry, I was just going to pick up on Mr Spencer’s point, which is probably the same as yours, Chair, which is that the Government remains committed to £1 billion of investment. Obviously, the Longannet project fell away, but that commitment remains.

**Q141 Chair:** Does it have to go through a new process to get confirmed or is it automatically available to go to another project?

**Peter Schofield:** The commitment is there and the Government has made that point even after the Longannet project fell away. The next stage, as Mr Fries says, is for further work to progress other ways of developing this technology. As I say, the £1 billion commitment remains. The precise profiling of that is something that we will have to talk about when the projects have been taken forward.

**Q142 Mr Spencer:** If I were being over-critical, it feels like it is an aspiration and a dream rather than a reality and a solid project. Is that a fair criticism? How can you identify the specific, if you like, timescale
and projects that are going to deliver this technology for us?

**Steven Fries:** I think it is more than a dream. If you look across the world, there is a wide portfolio of CCS demonstration projects. The UK Government, as Mr Schofield was emphasising, is committed to the development of CCS demonstration projects within the UK and this is an important technology to demonstrate.

Q143 **Caroline Lucas:** I wanted to come back to the £250 million that was announced in the Autumn Statement to help energy-intensive industries. How will that be used? It does not help them if it is just simply there as a cushion, if it does not actually get to be used to help them make more of that transition. It has certainly raised quite a few eyebrows given that many of those companies are already enjoying quite significant benefits from being given free allocation under the emissions trading system, so they have free permits and arguably have some windfall profits under that. How is that money going to be used to enable this transition in practical terms?

**Janice Munday:** One of the elements of the package, which is outside the £250 million, was the announcement that the Green Investment Bank intends as one of its first priorities through UK Green Investments to invest up to £100 million into a fund to co-fund with industry, and others, energy efficiency projects, which will be targeted particularly at those sectors that are energy intensive to try and get more efficiency. As I say, quite a few of them are at the end of what is technologically feasible but there are others who still have some way to go. That is a very important part of the package.

We will be consulting on how best to use the money because inevitably there are a lot of companies who would like to benefit and not all of them can do so. It is important that we improve our evidence base on what the current costs are that fall on particular sectors and plants and we will be looking to do that in the new year.

Q144 **Caroline Lucas:** But there is no condition specifically linked to the £250 million that was in the Autumn Statement?

**Janice Munday:** That will be for the Government to decide once we have improved the evidence base.

**Peter Schofield:** But is it worth adding—

Q145 **Chair:** You are advising Government, all of you together collectively?

**Peter Schofield:** Yes, sorry, it covers all of them. Just to pick up on Ms Lucas’ point one of the elements of the £250 million was the additional discount from the climate change levy for those companies that sign up to climate change agreements. Those agreements are part of a commitment to increase energy efficiency. That is one element of it. It might also be worth mentioning the announcement in the Budget last year that talked about relief from the carbon price floor for fossil fuels used to generate electricity in CHP plants, which is another element of this. I think there are a series of elements within this, added to the work of the Green Investment Bank whereby the Government—

**Chair:** I think we hope to come in a little bit more detail on the Autumn Statement and the Budget in a short while, if that is okay, so I will bring Sheryll Murray in.

Q146 **Sheryll Murray:** Some of our witnesses were members of the Green Economy Council and they have been involved in drafting *Enabling the Transition to a Green Economy*. They told us that the version that was published bears little resemblance to the version at the Green Economy Council’s meetings. Can you just explain the process and also how the working group input into this, please?

**Andrew Lawrence:** Well, it is certainly true that the document changed a lot and continuously throughout the process. I think in terms of the Green Economy Council, they had what we described as a scoping document at their February meeting. They responded to questions about broadly what areas it would be useful and helpful for the document to consider. Then they had a fuller draft at their June meeting to which they gave a more substantial response. We also had the sounding board.

I think the main reason why some of your earlier witnesses may have felt that it changed substantially was probably more to do with the look, feel and presentation. We had two key pieces of feedback consistently from stakeholders. The first was that the document had to be short; it was not going to get on to boardroom tables or be easy to get into unless it was short. We had an exercise in, if you like, paring it back to what we needed.

The second point they made was it would be better if it was an online document rather than a bulky carry-around because then you have people in a wide range of audiences, those who know what they are talking about through to the, “I just want to find out a bit” types. You need to have an online document that you can easily penetrate and get into. We ended up sectioning it off quite a lot. I think those are probably the main changes. Make it short and make it online, navigable, if you like, and that may be why it looks a bit different.

Q147 **Sheryll Murray:** Was there a redrafting exercise after the Minister’s comments?

**Andrew Lawrence:** Well, there would have been changes after the Minister’s comments, I suspect, but not very many towards the end. I think it was from June when we had that substantial set of comments from the Green Economy Council and others that we then worked through the governance procedures and we had to finalise a final version, which went round for collective clearance.

Q148 **Sheryll Murray:** Finally, it does not seem to include any new policies. Were you directed from the outset that the document would not include any new policies? If so, where did that come from?

**Andrew Lawrence:** The intention was that it would not be a new policy document. It would be a sort of gathering together of everything that the Government was doing. In that sense, it was a conscious decision
Q149 Mark Lazarowicz: How are responsibilities for the green economy shared across Government?

Steven Fries: Well, there is not one Department in the lead. All departments share responsibility and are working quite closely together. All the departments have their own objectives in this area but work quite closely together in order to strike the right balance. We have heard already this morning about a number of ways in which this balance is struck through the Green Economy Council operating at ministerial level. There are also working groups at the Director General level and also at the policy and economics level. There are a number of structures and ways of working across Departments that allow us to bring together various policy agendas and to strike the appropriate trade-offs among them.

Q150 Mark Lazarowicz: You said that there was not one Department in the lead on the green economy. I thought it was Defra?

Steven Fries: The responsibility for the agenda is shared across the departments. On specific items, such as Enabling the Transition to a Green Economy, Defra was in the lead on that specific exercise.

Q151 Mark Lazarowicz: But there is no one Department actually responsible for the overall lead on the green economy for co-ordination? Which Department co-ordinates the Green Economy Council? One Department must presumably be in some way in charge of it.

Janice Munday: My Department provides the secretariat for the Green Economy Council, so it is our job to convene the meetings and make sure they all happen. Briefing is provided by all Departments getting together. The Green Economy Council is chaired on a rotating basis by three Secretaries of State.

Q152 Mark Lazarowicz: That is DECC, Defra and BIS?

Janice Munday: Yes. The agenda is developed with a small working group of members of the Green Economy Council working with all the Departments.

Q153 Mark Lazarowicz: There is a secretariat, but there is no drive from—it is a secretariat role provided within BIS rather than a policy leadership role? I know that they can sometimes overlap, shall we say—

Janice Munday: Our offer to the Green Economy Council members was that they would work with us in driving the green economy, which is why we have this working group who work with us on the future agenda.

Q154 Mark Lazarowicz: Is this kind of rotation paralleled at the political level as well? There is no one Secretary of State who takes a lead on the Green Economy Council, is that correct?

Janice Munday: I think technically Vince Cable as Secretary of State for Business, Innovation and Skills announced the membership, but it is very much something that is owned by all three Secretaries of State.

Q155 Mark Lazarowicz: It was certainly suggested that Defra had the lead on the green economy. That is not correct by the sound of it?

Andrew Lawrence: As I said, it is quite common for a single responsible person to be identified so people know who to go to, if you like, and that was me in this case. Defra were leading the work on this document. The green economy policy is shared as described.

Q156 Mark Lazarowicz: It does seem a little bit unclear. You might have expected one Department to have been specifically the lead on the green economy, but you are telling us how it is. Can I just ask, now that Enabling the Transition to a Green Economy has been published, the document, what is the next step to follow it up? What is happening now?

Andrew Lawrence: The main focus is through the Green Economy Council. We have asked them what the future work programme is, what they would like to focus on, using this as a starting point, if you like. Clearly, all the announcements of policies within it are being progressed as well. We have committed to keeping this document up to date. Clearly, it is only as good as the information in it and after a period of time it will need an update. We have committed to do that—every few months I suspect it will be due—and update some time early next year.

Q157 Mark Lazarowicz: My final question if I can, BIS, Defra and DECC are involved in the Green Economy Council but the Treasury is not. You are going to pull all the strings from behind, of course, as you know. How do you relate to the Green Economy Council and green economy policy more generally across Government?

Peter Schofield: We are closely involved with all aspects of this. To give one example, in terms of the preparation of the Enabling the Transition to a Green Economy document, we were actively involved in the working groups. I participated in the senior leadership group and then obviously Treasury Ministers were part of signing off the overall document. That is one example, but we are actively involved in all of this.

Q158 Mark Lazarowicz: Is there a Cabinet Committee that has specific responsibility for the green economy? Is there a Cabinet Committee responsibility overall?

Andrew Lawrence: The Cabinet Committee that took and cleared this document was the Economic Affairs Committee.

Q159 Caroline Lucas: Coming back to the Autumn Statement, many of the green groups looked at that Autumn Statement and said that it marked the death knell of any aspiration to be the greenest Government...
ever. Can you explain a little bit about how your green economy teams were involved in drawing up that statement, the process?

Peter Schofield: Shall I talk a little bit about that because the Autumn Statement was the culmination of the second phase of the growth review? The growth review was kicked off in November last year and it is a process that involves every Department here and, indeed, many others. The work itself is led jointly by the Treasury and BIS. It is co-ordinated at an official level at a group that is chaired by a senior BIS official. I sit on that as well. Then it reports to a Cabinet Committee chaired jointly by the Chancellor and Vince Cable, but the Secretaries of State of the Departments represented here are all in attendance at those meetings.

Now, the growth review then had a whole series of different work streams, which took the work forward, which led to a first set of announcements at the time of the Budget and then a second set of announcements at the Autumn Statement. For each of those work streams, the responsible Department for the policy area was responsible for leading that and driving that forward. It is part of the culmination both in terms of The Plan for Growth in March and the Autumn Statement and the National Infrastructure Plan, all of the relevant Departments were involved. It was very much a cross-Whitehall process.

Q160 Caroline Lucas: That sounds wonderfully consensual. I am sure it probably might not have been. In terms of the opportunities offered by the green economy, what discussions are going on when it comes to new policies or spending plans being drawn up, particularly by the Treasury?

Peter Schofield: Well, I think a whole series of different announcements have already been made, which involve tax or policy measures. I talked earlier about the Budget announcements, which were quite significant in terms of the carbon price floor, the capitalisation of the Green Investment Bank and some regulatory measures.

Q161 Caroline Lucas: It depends on your perspective doesn’t it, because the Green Investment Bank is not capitalised nearly as much as this Committee, for example, wanted in the Environmental Audit Select Committee report that we produced. You can say, “Yes, there is some investment in rail” but actually that was massively outweighed by the investment in roads and new airports and so forth. I suppose it feels as if the environment is being treated as if it is always a burden and the impression is that we are going to try and stop the requirements to do anything on it. What are your teams doing to be able to really underline the opportunities, particularly the job opportunities that exist?

Peter Schofield: Yes, you are absolutely right that this is an opportunity. The earlier quote I gave from The Plan for Growth has very much emphasised the opportunities. You talked about the infrastructure announcements. The National Infrastructure Plan—and I have a copy here—is very much a significant document in terms of looking ahead at the constraints and the issues facing UK infrastructure as we move towards a green economy. For each of the major sectors of infrastructure—transport, energy, water, waste—there is a section in the document. This is very much framed in terms of what are the issues as those sectors and as the economy moves towards a green economy. The response in terms of the policy measures is very much designed to take us on that journey, to take us towards the vision that is outlined.

Q162 Caroline Lucas: Can I give you a practical example? For example, on the Green Investment Bank, the Autumn Statement announced that non-domestic energy efficiency would be a priority with £100 million made available next year. But in the 2011 Budget the Treasury originally said that £775 million would be available to get investments going. What happened between the original Budget and the Autumn Statement to mean that that was slashed to such a degree and were your Departments fighting to try and stop it?

Janice Munday: If I may pick up on that, the Budget has not been slashed in any way. I am the senior responsible officer for delivering the Green Investment Bank, I am assembling a high-powered team at the moment in the form of UK Green Investments. The Secretary of State for BIS, Vince Cable, made the announcement on Monday about what the priority sectors would be. We are working actively with markets and with players to make sure that we spend that money to maximum effect to deliver on our financial and green targets. The particular issue about the £100 million for non-domestic energy efficiency was reflecting that we are choosing to manage part of that money in order to make it more easily accessible to quite a large number of companies. We similarly have made an announcement in the infrastructure plan about a £100 million fund for energy from waste. We are actively engaged in discussions with financiers about a number of other projects. Our plan and our commitment is all go to spend that £775 million wisely.

Q163 Caroline Lucas: When will we see the figures of how—we have £100 million that has been identified in the Autumn Statement for the non-domestic energy efficiency. If it is already in the public domain, where is it? Where do we find out how the other £675 million has actually been spent?

Janice Munday: The Secretary of State for Business, Innovation and Skills made a statement to Parliament on Monday about the sector priorities for the Green Investment Bank so that is—

Q164 Caroline Lucas: But figures did not go with that, did it?

Janice Munday: That is simply because we are dependent on more projects coming through and that is why I have project financiers involved in those discussions. We set out that the aim is to spend 80% of the funding on those priority sectors, a minimum of 80%, leaving up to 20% for other sectors. Those discussions are going on. We are talking, for example, in other sectors about whether there is something we might do to help enable carbon capture and storage.
We are fully engaged with the market in looking for these opportunities.

Q165 Caroline Lucas: That £775 million is completely safe, ring fenced, and will be used for what it was said it would be used for back in the Budget?

Janice Munday: We are seeking to spend the money wisely within the targets on financial returns and green investment.

Q166 Caroline Lucas: That is not exactly what I asked. Can you just say yes or no? Will the £775 million be there—

Janice Munday: The £775 million is in my budget for next year.

Q167 Caroline Lucas: For Green Investment Bank investments?

Janice Munday: Yes.

Q168 Chair: You were talking just now about this growth review and BIS and the Treasury looking at how that growth review was going to come forward with the proposals. Where did Defra sit in this?

Andrew Lawrence: In the latest round we led our own growth reviews. There were six altogether, of which one was on the rural economy, which was—

Q169 Chair: What does your own growth review consist of? Was that just projects that were pertinent to Defra?

Andrew Lawrence: No, because Defra was in the lead and there were plenty of other departments involved. Of the six growth reviews, one was on the rural economy, one was on mid-sized businesses. There was one on skills, one on infrastructure. We led one and my Secretary of State was on the ministerial group that Peter has referred to and we were on the project board.

Q170 Chair: What were Defra’s views on the proposals to take forward, for example, the part of the Autumn Statement that involved the road building programmes?

Andrew Lawrence: My Secretary of State was on the ministerial group and was in agreement with the package.

Q171 Chair: You see the road growth building as part of green growth?

Andrew Lawrence: Yes, as part of the overall— the overall growth review looking across the piece—

Q172 Chair: But we are talking about green growth.

Andrew Lawrence: Yes. We supported the proposals as my Secretary of State was on the committee.

Q173 Chair: Did you do any appraisal to be able to give support for what would be green growth?

Peter Schofield: Well, in terms of the appraisals, each of the projects that is supported goes through the normal rigorous appraisal process as set out in the Green Book. Each of those appraisals needs to take account of all relevant aspects.

Q174 Chair: But isn’t that in the process of being reviewed, the Green Book and the appraisal?

Peter Schofield: Well, the Green Book is a living document. It is constantly under review because we need to make sure that it remains relevant and that aspects of an appraisal that need to be taken into account are valued effectively and considered properly. If you look online at the Green Book, there are a whole series of annexes that are working on together with other Departments in order to make sure that we keep it relevant. For example, in terms of how do you value greenhouse gas emissions as part of the process, we work very closely with colleagues in DECC on developing that.

Q175 Chair: No, it is just my concern is to what extent Defra’s views were fed into the outcome of the infrastructure plan, to what extent that would be locking in long-term, 20 to 25 years, carbon investment, if you see what I mean. I just want to be reassured that that discussion took place.

Andrew Lawrence: As Peter has described, the individual measures have their impact assessment and Defra is involved in all the clearance and discussion procedures that lead to the agreement and the announcement. So, yes, we are—

Q176 Chair: Individual measures?

Andrew Lawrence: Yes, we get to see the whole package.

Q177 Chair: On a case by case basis?

Andrew Lawrence: We get to see the whole package as it is developed and for its final approval.

Q178 Chair: Not looking at the whole wisdom of roads versus something else?

Andrew Lawrence: We get to look at the whole package to approve it and sign it off, including all the measures within it. That is through officials and up to the ministerial committee.

Steven Fries: If I could just add on this point, obviously within the carbon plan and the broader Government strategy there are quite ambitious targets to decarbonise road transport, particularly for light duty vehicles. One of the aspects of greening of the economy is actually the decarbonisation of mobility and, of course, we will need road transport as one of the elements of the transport mix going forward.

Q179 Caroline Lucas: Wasn’t there that case about the aviation expansion that was also implicit in the Autumn Statement where it was said that there would not be any further expansion at Heathrow, but that was read very much as meaning there probably will be expansion, or at least it is certainly not being ruled out on other airports in the south-east, which was a reversal from the Government’s original position on aviation? You might be able to make a case that because you are going to decarbonise road transport that it is fine to build more roads, but I think you would have a harder case to make in terms of the expansion of aviation. My question is the same as the Chair just asked: what is Defra’s position on that.
Aviation is about 3% of global glaring contradictions, and it is really frustrating. stuff us in terms of getting to our carbon reduction growing source of greenhouse gas emissions and will and so forth, against the fact that aviation is the fastest terms of its employment potential, in terms of growth trading off the fact that, yes, aviation is important in the philosophy is behind this. If we are constantly back—I am sorry, Chair, but it comes back to the very commodity. It is an important thing and it comes Environment is an important Caroline Lucas:

Well, aviation is an important Q181 Caroline Lucas: Well, we can argue about that as well because of the impact of when they are being emitted high up or when they are being emitted on the ground and if you look at the nitrogen impacts and so forth. I know what the figures are but the point is it is not sustainable to have ongoing aviation growth. My question is what discussions does Defra have about the part of the Autumn Statement that was about increasing aviation, or at least increasing the potential for more aviation? Q182 Chair: I think what the Committee is really interested in is how that was done and what the detail of that was. I do not know whether or not there are any documents that would set out what Defra’s position was at the time when these discussions took place? Peter Schofield: These discussions go through a Cabinet clearance process. They go through, first of all, the Economic Affairs Committee, which the Defra Secretary of State sits on. Defra officials are involved in the clearance of papers before they go there. This is a Government document and all parts of Government were signed up to it. Chair: I am conscious of time. We have one last sector that we want to cover, which is skills, so Peter Aldous.

Q183 Peter Aldous: This is really in regard to providing people with the skills they need to take advantage of the opportunities that will arise in the green economy. Now, our predecessor committee found that the current demand-led system was not working, mainly because employers were not able to actually articulate their skills needs. The system does not appear to have changed much since they reported, so I would just ask in the first instance what is the Government doing to ensure that we have those skills that are needed for the green economy?

Janice Munday: I can pick this question up because I come from the Department for Business, Innovation and Skills. You are right to refer to the fact that the Government skills policy is based around a policy of employer demand. That is the way we must do it to make sure that the skills are relevant to the needs of employers. Our question over the last year has been about whether the instruments we use so that employer demand can be translated into skills work has been as efficient and as effective as it might be on green skills. Through the Growth and Investment Fund we have put £50 million a year into a number of projects, one of which is the renewables training network, which is run by Renewables UK, to tackle the shortage of skilled workers in green energy industries. It will create 2,000 places on training courses specifically tailored to those wanting to make the transition into the renewable energy sector. That is a particularly significant initiative because it focuses particularly on mature skilled workers wishing to retrain.

Last month, we launched the National Skills Academy for Environmental Technologies, which will develop standards, deliver training and up-skillling for plumbers, electricians and technicians to install and maintain solar thermal hot water systems, small-scale photovoltaic heat pump and water harvesting and recycling systems, so that is very much around and in parallel with the work that we are doing on the Green Deal.

More widely, what we know from employers is that STEM skills is the thing that is most valuable for the majority of green economy jobs. We work closely with the Department for Education so that Government policies track students taking science, engineering and mathematics subjects. We have the STEMNET system to take the STEM ambassadors into school. We have our See Inside Manufacturing programme, which is designed to change students views of manufacturing. There is a lot of work to make people willing to come in and engage with the provision.

Peter Aldous: I think she has answered my question in one fell swoop.

Q184 Chair: I am just wanting to double check. Neil Carmichael, did you want to just come in a short while ago?

Neil Carmichael: Well, I was going to start defending the aviation sector, but we seem to have moved on.

Chair: No, I do not think we will go there.

Q185 Neil Carmichael: Except to say that in my constituency we have a huge number of firms actually supplying Airbus in technologies that are actually very modern, very innovative. They are also cutting
emissions and helping the sector to thrive in a measured and appropriate way consistent with protecting the environment and promoting economic growth.

Chair: Okay, I think we have heard that.

Q186 Neil Carmichael: I was going to talk about skills because it is a really important point. A motor organisation told me not so long ago that one of the areas in which they really need more expertise is electronic automotive sectors in terms of skills. Apparently, there are a large number of jobs obviously in terms of the development of the car, because in a few years' time 30% or 40% of the car will be electronics rather than internal combustion engines, and yet we really do not have anybody trained in that sector. It is a good example of a skills deficit that we still need to address. My key question, to reinforce the point that Peter has made, is: are we really making sufficient effort to understand what is needed in the business world in terms of the skills so that we can upgrade our education and training sectors to actually provide those skills?

Chair: I really want a very brief response because we have to carry on.

Janice Munday: I was just going to say we have a network of sector skills councils whose job it is to do that. We have one on electronics. We have ones on manufacturing. They are deeply engaged in these discussions through the UK Commission for Employers and Skills.

Chair: Thank you. I think the message is that skills always get left until the last and actually we see it as being really critical in moving the agenda forward. Our time is up. Thank you to all of you. We look forward to a rearranged session with the Defra Secretary of State and the Economic Secretary to the Treasury. Thank you all very much.
Wednesday 1 February 2012

Members present:
Joan Walley (Chair)

Peter Aldous
Neil Carmichael
Martin Caton
Zac Goldsmith
Mark Lazarowicz

Caroline Lucas
Sheryll Murray
Mr Mark Spencer
Dr Alan Whitehead
Simon Wright

Examination of Witnesses

Witnesses: Rt Hon Caroline Spelman MP, Secretary of State for Environment, Food and Rural Affairs, Chloe Smith MP, Economic Secretary, HM Treasury; Andrew Lawrence, Director, Strategy and Sustainability, Department for Environment, Food and Rural Affairs, and Peter Schofield, Director of Enterprise and Growth, HM Treasury, gave evidence.

Q187 Chair: This is a return visit, certainly for you, Secretary of State, and indeed, I think, for you, Minister, so thank you for taking the time to come before our Committee today. We are expecting votes at 2.30, so we are mindful of that. We have quite a lot of questions to get through.

From the cross-cutting perspective, how is the green economy being understood and implemented by Government? In terms of DEFRA and the Treasury, if DEFRA is playing the lead role in terms of Government policy, how is competitiveness being taken forward, and where is the cross-cutting role? We have particular concerns about press reports of discussions with a Cabinet Minister about environmental regulations. We would like to know a little about DEFRA’s role in that. I understand that there have been meetings with Oliver Letwin, the Environment Agency, and possibly with Natural England. We would like to know the perspective in terms of where the regulation fits into that, and DEFRA’s role in that context. It would be helpful to have that as a starting question, please.

Mrs Spelman: That is a big question, and I am not quite sure what you are driving at. I thought you wanted us to come here to talk principally about the vision for the green economy. That is the first matter I was briefed on. I think the specific thing you are talking about is the Red Tape Challenge on environmental regulation, which is a completely separate issue. As you have seen, at each successive quarter, under the auspices of the Cabinet Office, the Government have systematically been reviewing regulation with a view to better regulation. To make it perfectly clear, the objective of that exercise is to make sure that you protect the purpose for which the regulation was put in place, but you relieve the regulation when it is a duplication or there is any gold-plating to relieve the burden on business. That exercise was undertaken last summer, for example, for the food, agriculture and catering industry, and DEFRA was one of the first Departments to come forward from the Red Tape Taskforce with its Red Tape Challenge on agricultural regulation and a set of 200 recommendations on how to relieve the burden of regulation on agriculture. In the published sequence of reviews of regulation by Government, environmental regulation is coming up, I think in March. That is just one of a sequence of meetings about regulation.

Q188 Chair: So there have been meetings with DEFRA and the Cabinet Office on this.

Q188 Chair: So there have been meetings with DEFRA and the Cabinet Office on this.

Mrs Spelman: Yes, as with agriculture. It was exactly the same in the summer. The Cabinet Office is the lead Department on the Red Tape Challenge—I think I’m right about that.

Andrew Lawrence: That’s right.

Mrs Spelman: And systematically, each Government Department’s regulations come under this exercise. It is perfectly public and open. Last summer, Select Committee members were encouraged, if they wanted to, to take a view about the working of agricultural regulation. I am talking about domestic regulation now; this does not cover European regulation. Of course, an awful lot of environmental and agricultural regulation is determined at European level—80% of it. But in so far as the legislation is domestic, and within our gift, sequentially the Cabinet Office has seen to it that each Department’s areas of regulation come under the spotlight for about two or three months.

Andrew Lawrence: Yes. The environment theme, which is the one we are talking about—there are themes on water and food—was set on 1 September last year, and closed on 2 October. There are 3,100 stakeholder comments on the website, and there are also stakeholder submissions. They are now being considered by the Red Tape Challenge team at the Cabinet Office, and discussions are under way about how to respond and how to take them into account.

Q189 Chair: The point is that while we have the Secretary of State and a Treasury Minister in front of us we have the opportunity to say that we have grave concerns about the way in which the Chancellor has been suggesting that regulation could be anti-competitive as far as business is concerned, yet when it comes to the green economy, clearly quality standards are important. We would like to know what the state of play is between the Treasury and the Cabinet, and how DEFRA is being the champion of the environmental protection in all this.

Mrs Spelman: Absolutely, but did I not say in my earlier answer that we are there to protect the integrity
of the purpose for which the regulation was put in place? There is absolutely no suggestion that environmental protection will be compromised by a review of the regulation for it. A better example, because it has come right through to recommendations, which are public, is to look at how the agricultural Red Tape Challenge gave rise to perfectly sensible suggestions from all the stakeholders involved in working with agricultural regulation about how it might work more effectively. The same exercise, and in the sequence, was undertaken on environmental regulation. The same would apply to other Government Departments. When the Government came into office, they systematically gave an undertaking to try to achieve better regulation. It is not that we think regulation is bad or that it is good; it is neither. But bad regulation is bad, and that’s for sure. What we want is better regulation.

Q190 Chair: But what we want is some sense of where the transparency is in all of that.

Mrs Spelman: It is completely transparent. The Red Tape Challenge is on the website.

Q191 Chair: In terms of the meetings that are taking place, can I confirm that there have been meetings with DEFRA officials and that a ministerial representative from DEFRA was not there?

Mrs Spelman: There are meetings all the time between officials. I honestly think, with the greatest respect to the Select Committee Chairman, that you are trying to create a story out of nothing.

Chair: Okay—

Mrs Spelman: The fact is that the Government have systematically gone about a review of regulation in every sector of the economy with the purpose of making it better, so that it is less of a burden on business, while protecting the purpose for which it was set up. Officials meet across Government to discuss such things all the time, Ministers meet across Government to discuss such things all the time, and we meet our agencies all the time to discuss it. I understood that you wanted to talk about the green economy.

Chair: We do.

Mrs Spelman: So maybe I could just say—

Q192 Chair: Hold on a minute. A couple of Members want to come in, but, before they do, could you absolutely confirm, in the interest of transparency—obviously, there are concerns about the way in which the national planning policy framework was condensed in so many ways—that as Secretary of State, in your championing of the environmental agenda, you are going to be firmly at the helm of any discussions that might be taking place with the Treasury and the Cabinet Office on something that is integral to the green economy?

Mrs Spelman: Absolutely.

Q193 Caroline Lucas: Since we are on the issue of regulation, it would be really helpful if you could confirm or deny the stories out there that say that Oliver Letwin suggested that all of the environmental regulation should be condensed into 50 pages. That is the story, so it would be really helpful to know whether it is true.

Mrs Spelman: I am afraid that I do not go around reading stories.

Q194 Caroline Lucas: Well, we are outside the meetings, so we do not have much access because we are not inside. If we were, we would know.

Mrs Spelman: I am not in a position to confirm or deny a story in a newspaper. I do not feel that is my job. I was not at such a meeting. How can you possibly expect me to do that?

Q195 Caroline Lucas: Well, it is very helpful that you have told us that you were not at the meeting, because that is what I am trying to establish.

Mrs Spelman: There are plenty of meetings that take place.

Q196 Caroline Lucas: But if it were the case that Oliver Letwin was suggesting that all of this material should be condensed, in the interest of better regulation, into 50 pages, what would be the response from your Department?

Mrs Spelman: You cannot expect an official to answer a question about a meeting they were not at. In the same way that a Secretary of State cannot do that.

Q197 Chair: Okay. If the officials were at the meeting or knew about the meeting, it might be helpful if we could have a response from them.

Andrew Lawrence: I was not at any meeting, either.

Mrs Spelman: You cannot expect an official to answer a question about a meeting they were not at. In the same way that a Secretary of State cannot do that.

Q198 Zac Goldsmith: I do not think it is a matter of creating stories or trying to create stories. There are stories, and people are reacting to those stories. I have had a surprising number of letters from people who have read articles, particularly in The Guardian, about this process that Caroline is ignorant about, and it is causing concern. There was huge concern about the proposals to sell off the forest estate, and there were huge concerns about condensing the planning rules to 50 pages. That concern is raising its head again in response to stories in The Guardian, so I would say that, in the interest of having a proper discussion and finding our way through this process, the Government need to respond to those stories. They exist and people are reading them.

Mrs Spelman: I have responded, and I have explained the process to the Select Committee extremely clearly. The regulation of every area of the economy is being systematically reviewed, under the auspices of the Cabinet Office, in line with the coalition Government’s commitment to try to relieve the burden of regulation on business without damaging the purpose for which the regulation was put in place. Mr Goldsmith, I would strongly recommend that you go to talk to farmers about whether or not they want to have the burden of regulation on their industry reviewed. They have warmly welcomed the Red Tape Taskforce on agriculture, and the suggestions we receive from them and other stakeholders have given rise to recommendations that will make agricultural
regulation better. Why would I think that that is not possible in any other sector?

Q199 Zac Goldsmith: I do not think anyone is saying that it is not possible. I agree with you that farming has been very badly and overly regulated for many years. I have set up campaign groups calling for the simplification of the process. Likewise, there are all kinds of elements of the planning process that are not delivering the outcomes that people want. Nevertheless, the 50-page reduction that was provided as the Government’s first draft on planning sent shivers down many people’s spine with its emphasis on development and growth at any cost. The concern that people have, I think justifiably, is that if we were to try to reduce all environmental regulation down to 50 pages, we would lose a lot of the protections that people want. If you look at the website that the Government have put up asking people for their opinion on environmental regulation, I believe that pretty close to 100% of the respondents said that they either want no change or the strengthening of protections that people want. If you look at the website that the Government have put up asking people for their opinion on environmental regulation, I believe that pretty close to 100% of the respondents said that they either want no change or the strengthening of protections. So I would simply say that, in the interest of ensuring that all those people have their say and are reassured, and in the interest of preventing inaccurate stories from appearing in the newspapers, that discussion needs to be as open, transparent and inclusive as possible, because it is a big deal for many people.

Mrs Spelman: And it will be—compared with what we were going to do.

Q200 Chair: Let us move a little further on. In terms of understanding how all parts of Government are actually committed to the green economy, you have the responsibility for sustainability-proofing of Departments’ business plans from that green economy perspective. I wondered whether you could give us an idea of how that is being done?

Mrs Spelman: I have, of course, appeared in front of your Select Committee before to discuss how we were going to go about this, and I think it is good to be able to update the Select Committee on progress. The most recent is that the Home Affairs Sub-Committee on greening government has now been set up and has had its first meeting. I hope this Select Committee will be happy to hear that an idea that it originally suggested—to strengthen the ability of Government to hold itself to account for mainstreaming sustainable development—has found its expression in a Cabinet Sub-Committee that met for the first time yesterday. Systematically, as the Minister for Government policy who attended with me on that occasion set out, each Department’s Secretary of State appears before the Department’s business plans from that green economy perspective. I wondered whether you could give us an idea of how that is being done?

Mrs Spelman: I have, of course, appeared in front of your Select Committee before to discuss how we were going to go about this, and I think it is good to be able to update the Select Committee on progress. The most recent is that the Home Affairs Sub-Committee on greening government has now been set up and has had its first meeting. I hope this Select Committee will be happy to hear that an idea that it originally suggested—to strengthen the ability of Government to hold itself to account for mainstreaming sustainable development—has found its expression in a Cabinet Sub-Committee that met for the first time yesterday. Systematically, as the Minister for Government policy who attended with me on that occasion set out, each Department’s Secretary of State appears before the Minister for Government policy for a review of their progress against their business plan, at which point they are also questioned about their progress on sustainable development. I genuinely believe we are putting into place what we promised this Committee on our first visit we would do.

Q201 Chair: Thank you. May I turn to the Treasury Minister? We were very interested in the Government’s response to our Carbon Budgets report. One aspect which was of particular concern, and which we highlighted in our response, was that the Government plans are to go no further and no faster than the position that has been taken in Europe. I just wonder how you feel that that position helps us get further down the road of the green economy.

Miss Smith: I certainly will. May I also, for administrative purposes, introduce Peter Schofield, whose name may not have been on some people’s papers for the meeting. He is the Director of Enterprise and Growth at the Treasury. [Interruption.] I have managed controversy within the first sentence—wonderful. More seriously, Mrs Walley, as you rightly point out, in a recent speech the Chancellor made that statement about wishing to go no faster and no slower than our near neighbours, in terms of implementing specific carbon targets that, in his layout, should be done in co-ordination with our European neighbours. That speaks for itself. Anyone who has read the entirety of the speech will understand the fullness of that. The point I would make for the Committee here is that the Treasury’s conception of a green economy is just as it is for DEFRA and as is it for the whole Government, which is that it is a whole-economy approach—point No. 1—first and foremost. The green economy is not something that is separated and netted off from the whole economy, which means that we need to be able to assist as far as we are able, as the Government, all sectors of the existing economy and what we hope will be the future economy, to be as green as possible. We need to do that.

However, we are aware of the world around us—the fact is that there are targets in some of the international agreements that we have—and there are countries around us that are taking their own choices on that, and we have an economy of our own in the immediate term of which we take great care. It is the whole Government’s priority to do that, but yet to ensure that we meet all our commitments on moving towards the green economy.

Q202 Chair: But I think there is concern that, by taking what appears to be the lowest-common-denominator approach, we are not really putting ourselves at the competitive edge and not really leading in the way we could.

Miss Smith: I would not accept that, for two reasons. Within the broader speech that we were referring to, there is an important point there about going “no slower than”. That is one half of the statement. There are two halves to that balance. Clearly, it is important to say that we want to be in a robust position, showing what Britain can do, and I think that that was encapsulated in that balance. The Chancellor clearly also has regard to not wishing to see damage to the UK economy.

However, the other point I would straight away make is that there are many examples where we will be able to demonstrate, and are already demonstrating, that the UK has a competitive advantage. Some will come in some of the more innovative technologies that have recently come about, of which we will see many more, but others will then come as we green the whole of our economy.
Q203 Mr Spencer: I am sure the Secretary of State will be aware of what happened to the pig and poultry industry when the UK moved quicker than our European colleagues. Does the Treasury recognise that danger of moving faster than our European colleagues and exporting quite a lot of our economy, but not actually benefiting the globe in terms of our green agenda? [Interruption.]

Miss Smith: May I answer that question when we return?

Chair: I think that the question was to the Secretary of State.

Mr Spencer: To both the Secretary of State and the Economic Secretary.

Mrs Spelman: Oh yes—on pig prices and farming prices.

Q204 Mr Spencer: It is about the comparison between what has happened to the pig industry and the poultry industry, and the way we jumped ahead of our European neighbours.

Mrs Spelman: To be fair, that is an Agriculture Ministers’ question. It is the regulation of the industry at a European level that is at stake. I am sure that Select Committee members will have covered what happened regarding eggs. We complied with the regulations, along with most other member states, but, off the top of my head, 11 member states did not comply. They are currently facing infraction proceedings because they are non-compliant with the welfare regulations on enriched cages for egg-laying hens.

The next problem coming down the track to meet us is the fact that the United Kingdom, in response to a desire on the part of our consumers to have better welfare standards for the pig industry, was one of the first to ban stalls and tethers. In our pig industry—all Select Committee members have probably seen this—free range pork is quite a common feature. The European Commission intend to introduce a ban from January next year. The experience of the egg producers meant that, as DEFRA Ministers, we put on to the Commission’s radar screen as early as February last year the need for it to make an early start on actively encouraging all the other member states to prepare for the ban we already have in place. We are well aware that when we comply with the law here, we expect the Commission to do its job by enforcing the law elsewhere. We are not alone in this; none the less, we are in a difficult position because you cannot just ban the import of products that are not produced to a European standard.

Q205 Mr Spencer: Has the Treasury learned that lesson? Has it seen what has happened in that sector, and will it apply the rules? If we jump ahead of our European neighbours by implementing stronger green regulations, there is a danger that we will export business to our European colleagues.

Miss Smith: Of course the Treasury is aware of those risks, and we seek to make balanced decisions across Government as a whole.

Q206 Caroline Lucas: Going back to the regulation, did you agree, Minister, with the Chancellor—I am not sure whether you are allowed to say so if you didn’t—when he said he thought the transposition of the habitats directive was imposing “ridiculous costs” on British business? Also, does the Secretary of State agree that such sentiments understandably send shivers up the spines of people who are concerned about the future of environmental protection measures such as the habitats directive?

Miss Smith: I will give a very brief answer because I am sure we need to press on, what with the votes in the House. Yes, I absolutely can see the direction in which you are going. Perhaps the Secretary of State will deal with this one.

Mrs Spelman: We have started our work on the habitats directive review. Again, this is part of reviewing the regulation to see how well it works and whether we can make it work better. We had a stakeholder meeting in DEFRA last week, and I thought it was very constructive. We had a wide range of stakeholders that work with the habitats directive sitting together with us and the NGOs, talking about how we might get the directive to work better in the handful of cases where it doesn’t. I think it is important to put this issue in proportion. In the vast majority of cases, the habitats directive operates perfectly well in the decision-making process. There are a handful of cases where we have had problems, and it is interesting that that often correlates with a port. I found it really encouraging at the stakeholder meeting that the RSPB and Associated British Ports sat together, and together spoke about how they had worked out a way to help the habitats directive work better in the environment of a port. It is in the 0.5% of cases in which the operation of the habitats directive has caused some problems that we are working through, with the stakeholders, how to get that regulation working better. There is no question of resiling from the directive.

Q207 Caroline Lucas: Do you agree, though, that it is unhelpful in terms of wider understanding if you have a Chancellor who talks about “ridiculous costs” on British business, particularly if you are saying that applies only to 0.5% of the habitats directive? What I want to know is whether you agree—yes or no—that that is an unhelpful comment.

Mrs Spelman: The Chancellor was talking about the ports cases in particular. There were problems at Immingham, Falmouth and Felixstowe, many of which have now been resolved.

Q208 Caroline Lucas: But do you think it was helpful to say it in the way that he did? That is all I want to know.

Mrs Spelman: It has helped the review of the working of the habitats directive to have drawn to the attention of all the stakeholders that there is a better way forward, which is to bring them together and work through how we can get this directive working better. There is no question of resiling from the habitats directive; we have signed up to it.
Q209 Chair: The point we are trying to make is: if it is joined-up government, where does the Treasury fit in with that?

Mrs Spelman: It is perfectly joined up. We sit around a Cabinet table and we discuss the habitats directive. I spoke with my colleagues about our offer to do two things at DEFRA. One was to look in detail at the handful of cases where there are problems, and if we can find better ways of working that benefit everybody, to take those forward. That is exactly what I have been doing. It is a DEFRA lead on the subject.

Q210 Caroline Lucas: Did you know that the Chancellor was going to talk about the “ridiculous costs” on British business of gold-plating the habitats directive? If Government are so nicely joined up—did you know that?

Mrs Spelman: No, in the same way as the Chancellor does not know what I am saying now—he will read the record of it. How can any Secretary of State know everybody’s utterances at all times and in all places?

Q211 Caroline Lucas: That particular statement sent waves through the green movement. It suddenly sounded as though this Government were not trying to be the greenest Government ever, but were actually trying to row back from environmental regulation. If the Chancellor is going to be saying that, I would have thought that he might have cleared it with the Secretary of State for the Environment first.

Mrs Spelman: There is no question of rowing back from our signature to the habitats directive. We have done a great deal of work to make sure that it is applied more effectively and to work with the stakeholders to ensure that we use the regulation better. I think that is a constructive, helpful thing to do.

Chair: We have two quick questions, one from Peter Aldous and one from Martin Caton.

Q212 Peter Aldous: We have covered a wide range of ground on this head question and its supplements. In terms of the priority that the Government are giving to the green economy, I am very conscious that one of the Government’s main drivers for economic growth is the local economic partnerships. A number of LEPS, including the New Anglia LEPS, which covers both the Economic Secretary’s constituency and mine, very much embrace the green economy message and green pathfinder status. I would like an assurance and some information about what the Government are doing to provide a framework in which those LEPS can move forward.

Miss Smith: First, I welcome, as you rightly say, that we share a LEPS, and as a local MP I too am very pleased with its work. I suggest that there is absolutely a role for LEPS in identifying industries that can be the focal point for the areas in which they work. Further to my point that, in many ways, there is no such thing as the green economy because it is part and parcel of the whole economy, I would say that LEPS need to be conscious of the green aspects of every industry and business they seek to support and promote. They certainly should act with consideration of that. You will forgive me, as I do not have ministerial responsibility for the full framework in which they work, but I hope that is enough to reassure the Committee on the basic point.

Mrs Spelman: I think Mr Lawrence would like to come in on that. We should be clear that LEPS come under the aegis of DCLG, but none the less, at DEFRA, because of our cross-cutting role on a green economy, we work very closely with DCLG. The interlinking of LEPS with local nature partnerships is something I am sure Mr Lawrence wants to come in on.

Andrew Lawrence: Yes, absolutely—

Chair: I think perhaps the detail of that might take us in a direction in which we do not want to go, given the number of questions we have. If there is time, we can come to that at the end, but I know Martin Caton wanted to come in.

Q213 Martin Caton: Secretary of State, you said you have been reviewing the habitats directive. Will you share with us what gold-plating you have identified in that review process?

Mrs Spelman: Two examples come to mind. At Immingham, there was a need to find a biodiversity offsetting strategy to deal with the habitat for curlews. I think it was claimed there were six curlews at Immingham?

Andrew Lawrence: I think that’s right.

Mrs Spelman: It was simply a question of trying to find a way forward with the developer to make sure that the habitat of those curlews was protected. It ran into difficulties actually relating to the historical antecedents of a previous planning application. When you drilled into it, it was not in fact mainly to do with any dispute about the habitat of the birds concerned, but it went back to a historical dispute about the planning for the development.

One of the points of having our troubleshooting team in DEFRA to deal with the handful of cases where the habitats directive appears, or purports, to be a problem is to drill into the reality of whether it is the habitats directive, or whether it is, in fact, something else. That case is, if not completely resolved, well on its way to being resolved, so that is an illustration for you of my Department—a lead Department on the environment—working across government to find solutions in the very small number of cases where we are told the habitats directive is a problem.

Q214 Martin Caton: That sounds like it was not the habitats directive.

Mrs Spelman: In the end it mainly wasn’t, when you looked into it, but as you know from your own surgery, people sometimes think it is one problem and are not aware that it is actually another.

Q215 Martin Caton: But the Chancellor of the Exchequer is talking about gold-plating EU legislation, such as the habitats directive. You are reviewing it, but you cannot give us an example of gold-plating.

Mrs Spelman: That is not true—I have not said that. What I gave was an illustration for you of the way in which we resolved the problem, which did relate to...
the habitats directive. Under the habitats directive, we would be required to satisfy ourselves that the habitat for the stone curlew was going to be protected as part of looking at this development. That was properly followed—the course was followed—and we got into finding a solution with the developer in that instance. Part of the review of the habitats directive with our stakeholders last week was to identify examples of gold plating. I opened the review process, and I gave you an example of the time when I was there where NGOs such as the RSPB and Associated British Ports themselves came forward with suggestions about how to get the regulation working better. I did not stay for the whole day—my colleague, Richard Benyon, the Under-Secretary of State, was there for the remainder of the day. We have collated from all stakeholders examples of where there may be duplication or gold-plating and where we can make it work better. That exercise took a full day with good outcomes, which we will take forward.

Q216 Mark Lazarowicz: Can I take the question back to the wider issue of the green economy to get an indication, in your view, of what you envision the green economy, or a greened economy, looking like in 20 or 30 years? Is it just going to be the economy as we have it now with a few green bits, or will it be something radically different? If so, what will the difference consist of?

Mrs Spelman: I am really glad you asked me that question, because that is what I thought we were here to discuss. I wanted to commend to Committee members, if they have not already read it, this document called Enabling the Transition to a Green Economy, ETGE for short, but we often, in the parlance, call it the road map. It sets out right at the outset what our vision is: “A green economy will maintain and promote growth across the whole economy, while managing natural assets sustainably”, so that would be our definition. If you ask me what it will look like, it is not a snapshot of how the economy is today, but it is about transitioning the economy to one that is low carbon and has other environmental goods and service sectors transforming the whole economy. As the Treasury Minister has said, into one that is geared towards the long-term and sustainable growth. The importance of this document— it is in shorthand sometimes called the road map—is that business asked us for this. I am one of the three chairs of the Green Economy Council, which has representatives of all sectors of the economy, including the trade unions. They asked the Government for a road map, so that we would set a clear direction of travel for them as stakeholders in our economy, setting out what we would like to achieve and by when, in order to fulfil this vision. This is really pivotal in terms of delivering that vision for the green economy.

Q217 Mark Lazarowicz: We are fortunate in having questioned some of the officials here on that very document a couple of weeks ago. It is certainly a good document. However, can I press you a bit further? I am not asking you to write science fiction, but can I get some idea of how different the economy might look in 20 or 30 years, rather than dealing with the general document here? How are things going to be different?

Mrs Spelman: I would bring two things together. I would bring the road map, which sets out signposts, together with the climate change risk assessment, which we published last week, which we need to respond to with an adaptation plan by 2013. I think it is very clear that in order for the economy to be greened, we need to have a low-carbon economy; we also need an economy that is more resource efficient. You will know that DEFRA calculated that £23 billion a year could be saved to the domestic economy if we were more resource efficient. By that I mean more efficient use of resources such as water and energy, reduced waste and more recycling. These are all areas of the economy that present enormous opportunities for growth. They are indeed already the growth industries.

If you look at the rate of growth in, say, the waste industry, which is at 4% per annum, it significantly out-performs some other sectors of the economy. It is contributing not only growth to the economy, but the means of greening the economy. I would expect to see a lot of innovation in this area. I would expect to see adaptation and mitigation as part of our response to climate change. Frankly, if we do not manage those changes to our economy by 2030, the climate change risk assessment shows that we will be in serious trouble. The risk assessment is based on the assumption that if we do nothing, this is what the world will look like in 2030, 2050 and 2080. It has been broadly well received, because all stakeholders can see what they need to do to transform the economy by those milestones.

Q218 Chair: Given that the climate change risk assessment you just referred to came out of the Climate Change Act, why was there not a full statement in Parliament about it, so that Parliament had the chance to look at it?

Mrs Spelman: I am sure you know that I invited you to a presentation in the House of Commons the day before.

Q219 Chair: That is not quite the same thing as actually presenting it to Parliament.

Mrs Spelman: Perhaps you would just let me explain. There is no visual aid capacity in the Commons Chamber. The climate change risk assessment has a really significant number of graphs and tables which are integral to understanding it, so I took the view that it was better to offer, on a cross-party basis, a full briefing for all Members of both Houses the day before we made it public. Obviously, we embargoed it, but we made it possible for all Members of both Houses to come to that briefing. Many did, including the Opposition Front Bench in the Commons, and they were able to cross-question not just the Ministers but the civil servants responsible for the report. I have to say that it was a really valuable occasion to debate and discuss with the scientists, including the maps, graphs and charts that is their evidence.

When the day comes that we can pull down a screen in the Chamber and actually project those graphs and
maps and to have that debate as Members of Parliament, I think it would be possible in a 45-minute oral statement to get near the quality of debate that we had in an open-ended time scale for both Houses the night before. It was my choice. I know the Opposition asked for an urgent question, but that was disallowed by the Speaker, in no small part because Members of Parliament in both Houses had had the opportunity to find out more about the risk assessment before we published it.

Q220 Mark Lazarowicz: Can I ask you what your initial thoughts are on the green economy elements of the Rio+20 zero draft, which the UN published early this month?

Mrs Spelman: Yes, you can—with pleasure—and it would be worth taking a little bit of time on this. DEFRA is the lead Department on our preparations for Rio+20. The zero draft is the first thing to appear as the content for the summit in June. There are two aspects of the summit: one is the green economy and the other is the institutional framework to deliver that green economy. The zero draft is good as far as it goes, but I still think it lacks the tangible outcomes that will genuinely drive the green economy. Therefore the UK, as part of trying to provide leadership in this area, is certainly willing to help the Colombians with their endeavour to produce sustainable development goals as a tangible outcome of the Rio+20 summit. We support those in principle, but we want to go beyond that now and actually start to provide some thoughts on what those sustainable development goals might look like.

In a ministerial preparatory meeting in Delhi in October last year, there was very clear consensus among the Environment Ministers from around the world who attended it that Rio+20’s green economy content should cover subjects such as sustainable agriculture, access to energy, water, biodiversity in forests, poverty-eradication—remarkable consensus around the content. What we need to do now is to take that consensus forward in debate and discussion with Environment Ministers and help to provide some thoughts on what a sustainable development goal for sustainable agriculture might look like. We actually need to produce some content, because if Environment Ministers arrive in Rio in June without some significant preparatory work, we will probably end up with a communique, which is all fine and good, but will it actually deliver the greening of the economy? Without more content, I am not convinced. Do you want to come in on this, Andrew?

Andrew Lawrence: That is a very clear explanation. The draft—I have a copy here—was issued in early January and the first discussions about it were held in New York last week. They have had an initial discussion on the zero draft; there are regular negotiating sessions between now and June in New York, as well as intersessional sessions to look at the process. We are very much in the sort of mode that the Secretary of State is talking about. We now have a document to reflect and act upon, and countries can now state clearly what they would like to see by way of progress between now and the event in June.

Q221 Dr Whitehead: We have the green economy document, which outlines the transition. How do you propose to connect that with what you will be seeking from the Rio+20 process?

Mrs Spelman: I explained to the Environment Audit Committee that the Brazilian plan is to convene business and civil society in the three or four days preceding the ministerial segment, so that business and civil society can help to shape what comes out of the ministerial segment. I think that is a very good opportunity for the United Kingdom to provide some leadership and encouragement to our Colombian colleagues to start to flesh out what the sustainable development goals might look like. I am sure that the Select Committee would enjoy getting actively into that debate, because I think we should bring some content to the table.

Chair: Dr Whitehead, do you want to follow on with further questions about Rio?
community and NGOs. I am just about to run another set of roadshows for the business community and NGOs, which I mentioned in response to DEFRA oral questions last week. It is about an active process of engagement across the economy to get a really strong delegation to Rio de Janeiro, providing a really strong input on how together we plan to green our economy.

Andrew Lawrence: Let me talk about the working groups. In October, when the Secretary of State held her consultation sessions with business and civil society, we asked them, “What would you like to focus on?” They came up with three areas: sustainability reporting, sustainable agriculture, and sustainable energy. The Secretary of State asked me to convene a group of businesses—we invited them, but it was their choice whether to come or not—to talk through what we might aim for at Rio in those areas. We have held two of those sessions already, and the third one is to come, so we are making quite good progress ahead of the statement next week, which you mentioned.

Mrs Spelman: It is also important to add that we are part of the European Union’s contribution—we are part of the EU. We have provided a lot of support on this to Commissioner Potocnik, the lead Commissioner, and he has welcomed the contribution the UK has made to the preparation of the EU position on Rio. That has been submitted already, and attached to it is the EU road map for the transition to a green economy. That is one of the reasons why we try not to use the words “road map” for our own, because it creates confusion as to which road map we are talking about. So there is an EU road map, which is attached to the EU contribution to the Rio preparations, but, of course, we have our own domestic road map. We will be working very closely with the EU Commissioner and other member states to ensure that Europe has a strong representation at the Rio+20 summit.

Q222 Dr Whitehead: Road maps have towns and villages marked on them as well as roads. If it is worth trumpeting what the UK is doing on the green economy to Rio+20, rather than just engaging in the process of Rio+20, what are the particular aspects that should be put in that trumpeting?

Mrs Spelman: I think one of our strongest contributions is resource efficiency. Whether you are a developed or a developing country, resource efficiency is for everyone. Resource efficiency is a theme of its time. It is one of the ways that we can all most successfully grow our economies. Raw materials are in increasingly short supply in the face of the demand for the uses we require them for. Resource efficiency is a win-win. It is clear that a more resource-efficient economy is an economy that is more resilient and that will grow sustainably. It is one of our strongest contributions. We know already, from preparatory meetings, that it will be warmly received by both developed and developing countries. The Japanese Minister is very keen to see resource efficiency promoted at Rio+20. The Chinese have a growing economy and—you can perfectly understand why—are looking at constrained natural resources and thinking hard about how to keep their economy sustainably growing with pressure on resources. They are very keen to see resource efficiency discussed. Europe is in a strong position, because we have an elaborated road map. Its member states that, like us, have a domestic road map really have something to bring and share. If I were to point to one area where I think we can make a really constructive contribution, it is on resource efficiency.

Q223 Dr Whitehead: No doubt you have had a look at the research by the Stockholm Institute on the planetary boundaries within which humanity can operate safely. Its report identified three that may already have been exceeded: ecosystem biodiversity, climate change and the nitrogen cycle. Have you identified—this might relate to what you are thinking about regarding Rio—which of those specific activities do you not want business engaged in, so that they do not push us further towards the nine planetary boundaries the Stockholm Institute talks about?

Mrs Spelman: We are obviously conscious of the risks of crossing planetary boundaries and causing irreversible damage to our ecosystems. I certainly take that from the Stockholm Institute’s work. We value the natural environment as part of that. What their work shows is that we are already on the wrong trajectory with a number of these cycles. I am hopeful that at Rio we might be able to tackle the nitrogen cycle through looking at sustainable agriculture and the water cycle. I think there will be a strong appetite to debate and discuss that at Rio, because it is an integral part of the sustainable development goals. If water is in short supply, it will be very difficult to have sustainable development.

At the preparatory meeting in India, I detected a huge appetite among both developed and developing countries to have that issue debated. They would say that we should talk just as much about the green economy as the blue economy in Rio de Janeiro. It is definitely worth discussing the water cycle when we are there. That is not to name just two, but it is business as being held out of that. Business has an important contribution to make to the debate on this question, and I think it will want to. If I think about the Green Economy Council members’ interests, they have every interest in being part of the debate about what we do to reverse damaging trends. They show signs of really good practice in beginning to reverse those trends. Again, we want to share our best practice.

Q224 Caroline Lucas: Is there progress on any sense of what a concrete outcome might be in this area? I am thinking of the subsidies that go to fossil fuels, for example. That is one thing I imagine we do not want.

Mrs Spelman: Harmful subsidies, yes. In terms of a tangible outcome from Rio de Janeiro, the best option on the table at the moment is the Colombian/ Guatemalan proposal for sustainable development goals. That would go further than just a communiqué. There certainly was willingness around the table in the preparatory meetings to discuss the consequences of harmful subsidies. That might well come up in the context of debating sustainable agriculture, because
protectionism makes agriculture less sustainable when such subsidies are applied in the wrong way. We could get the matter discussed, but there is awareness that with the climate change negotiations we have to be careful that the Rio+20 summit does not work across what is being achieved as part of successive climate change negotiations. Progress was made in Durban, including some progress on this question of harmful subsidies, and the willingness to include agriculture as a work-stream in the next COP.

We must not work against progress that is already happening in other conventions, and we have the biodiversity convention coming up this autumn. I think it is possible for Rio to have a really concrete debate about what tangible progress towards genuinely sustainable development would look like. Working through the SDGs as a complement to MDGs is a good way of going about it.

Q225 Caroline Lucas: This is a not a comment on what you are doing: it applies to all Governments. We have been at this—talking about what a sustainable economy would look like—since 1972. This is not a criticism of the British Government; it is a criticism of the intergovernmental process, I suppose. If we are still sitting around talking about what it might look like, it feels deeply frustrating.

Mrs Spelman: I refer the hon. Lady to the zero draft, paragraph 42c, which reads—this is something we would sign up to—“to gradually eliminate subsidies that have considerable negative effects on the environment and are incompatible with sustainable development, complemented with measures to protect poor and vulnerable groups”.

Caroline Lucas: I like it very much, except for the “gradually.” That could be another 30 years.

Q226 Chair: Just before we leave the question of Rio, you mentioned, Secretary of State, how important it is that everybody gets involved with this profile. We agree, and we have had our report on Rio, as you know. One of the things I contacted you about subsequently was the Hard Rain project, and the opportunity to use that as a major event at Rio. It would be very helpful to have some indication from you—not necessarily now but in the near future—of how that could be a pivotal event.

Mrs Spelman: I have not forgotten about that, and I know that my private office officials have that in hand. I thought that the Hard Rain event here in the House of Commons was very successful in raising awareness. We have to be conscious that we are not the hosts of the Rio+20 event. Brazil is, so we have to be sure in suggesting to them how they might want to run the conference that the suggestion is acceptable to them. I have a good working relationship with Izabella Teixeira, the Environment Minister, and I am due to see her later this month. On that occasion, I will put the suggestion to her, face to face, and see whether it would be welcomed.

Q227 Mr Spencer: I just want to go back to the statement that “the green economy will maximise value and growth...whilst managing resources sustainably.” It seems to me that, given that natural resources are finite and our economy is still based on consumption, there must come a point when growth can no longer possible. I just wondered whether you agreed with that. Can we carry on growing the economy for ever, or is there a point in time when it can no longer grow?

Miss Smith: From a Treasury perspective, we take an interest in the whole of the economy, and green matters must be a priority throughout that. We have a range of different resources that are in use throughout the economy, and perhaps, Caroline, you will go on to talk about natural resources specifically. If I may just take the opportunity to talk about one of the early points on this journey, we have heavy industries in this country that use resources of a further type, including fossil fuels. I think it has been made very clear from our actions in the Autumn Statement, and indeed around that, that we are conscious that we can’t just shut those out. Plainly, we can’t just say, “We’re cutting you off, and that’s the end of it.” We as an economy and a nation will need to use those resources for some time to come, hence the package the Treasury has announced to assist energy-intensive industries. I am just putting that forward as recognition that we must of course act with regard to the resources we all use, and absolutely with regard to their greenness—that is what this session is about—and note that there are staging posts on the route to a greener economy. I don’t think we can act with full disregard of where we are at present.

Q228 Mr Spencer: Will we ever get to the point where we are not growing, or will we change, become green and carry on growing?

Mrs Spelman: This is based on a false premise. It is not whether we grow; it is how we grow. What we have learned from the application of science is that there is a great deal we can do to change the way we grow, and that we can grow sustainably. I genuinely think that the perception that somehow environmental and economic goals are incompatible is false. If you take the example of the transition to a low-carbon economy, based, ultimately, entirely on renewable energy, you will arrive at a point exponentially where you aren’t consuming energy in a detrimental way. That is just one example, but there are lots of them. What we need to do is to look for the win-wins whereby, with reduced environmental impact and a more sustainable use of resources, we can facilitate rates of sustainable growth. I don’t think it is either/or; it is both/and.

Miss Smith: May I come back on one vital point? In a number of our questions today we should be conscious of the risks of not taking action. That plays to your point about things that may be finite or infinite. The Stern report sets out clearly what the cost of not acting would be, and that the end point would be pretty catastrophic—at the extent to which he sets it out—if we took the wrong steps on this journey. We need to act in the near future to avoid such catastrophic damage. This speaks to the point about not all things being infinite. We absolutely must act now.
Q229 Mr Spencer: What I am trying to understand is whether we as a nation are addicted to growth, in that your political opponents and the media will challenge you if the economy does not grow. Perhaps the Treasury should be looking at a model whereby growth is not as important as the economy just turning over; or is that something we are not considering?

Miss Smith: I suspect you would allow me to say that that is not something the Treasury can own up to. Obviously, we seek economic growth, and that is a vital priority for reasons that everyone is well aware of, and into which Committees other than this go in detail. The fact is that we have to find ways of growing the economy, because that means jobs. Let's not use jargon. We are talking about jobs for you, me, our constituents, our mums and dads, and our children. We are talking about basic stuff. That is what economic growth means. Let's be specific about that.

Peter Schofield: I don't mean to interrupt the Minister, but I just want to say that a dimension worth flagging up is the work being done through, for example, the Technology Strategy Board to help promote innovation, which will move us closer to the green economy. UK firms have been very successful in bringing innovative ideas and products to market. A key role for Government is to support those firms in creating not only products for a UK market, but export opportunities.

Mrs Spelman: On that export opportunity, we are not hermetically sealed. You cannot look at whether the British economy should grow in isolation from the rest of the world. What really brings that home is the statistic that in just 13 years there will be 1 billion more mouths to feed on the planet. People often focus on 2050, and talk about 9 billion in 2050, but a much more urgent and pressing need is the extra 1 billion in just 13 years. That is one of the reasons why DEFRA has a priority to produce more food sustainably. Absolutely written into our business plan is to do our utmost to help an industry grow sustainably, because it makes perfect economic sense for this country, but because tax is a cost to waste, it made waste into a liability. There are now construction companies that are zero waste, because they know that this Government are doubling the rate of landfill tax. It seems to come down to the combination of smart regulation and tax. I suppose this goes back to what we talked about at the beginning of the session: if you want to encourage zero waste, create products that last, create products that can be recycled and dismantled easily and so on, that comes down to a different approach to producer responsibility and taxation—things which the current narrative of this Government seems to be moving away from.

Q230 Zac Goldsmith: I think you are right that the issue is really the quality of growth rather than growth itself; stimulating different types of growth has got to be the objective. Historically, growth has happened at the expense of the natural world; I don’t think there’s any argument about that. Other than in carbon—we have already talked a bit about low-carbon policies—what are the Government’s big ideas about delineating growth from environmental destruction? What are you going to do to make waste—

Mrs Spelman: Absolutely. We must go beyond carbon. I get frustrated that there is too much focus on carbon. Actually, resource efficiency is much wider than that. It is looking at all natural resources, particularly water, energy, rare metals and mineral resources that are in increasingly short supply. For example, we use drinking water for every water function—pretty much—in our daily lives, and that is one of the things we have to look at. Should we be rethinking completely how to be resource-efficient in relation to energy with renewables, in relation to water with water efficiency, and in relation to natural resources? In a sense, the market is providing one of the drivers, because the steep rise in commodity prices is a warning about the scarcity of those resources, and it is helping to drive the kind of innovation the Treasury official was talking about. We need a lot more of it. These days, people increasingly do not think about waste; they think about resource. One of the big drivers of change has been the landfill tax. Instead of burying these precious resources in the ground, there is a national realisation, expressed in fiscal form, that we should be thinking about recycling them. DEFRA has certainly pledged in its Review of Waste Policy in England to take forward a consultation on restricting the landfilling of ‘wood waste’ and reviewing the case for restrictions on other materials to landfill. A gain, this is to stimulate the recycling market to find new uses for these resources. I am constantly pleasantly surprised by the level of innovation you see in the waste industry. Something that today—presently—we have not found a recyclable use for, tomorrow becomes a new product used in a different way. There is a continuous and accelerating rate of transition in that area of the economy—but much wider than carbon.

Q231 Zac Goldsmith: I totally agree with you. Landfill tax is probably the most effective environmental taxation we have ever introduced in this country, but because tax is a cost to waste, it made waste into a liability. There are now construction companies that are zero waste, because they fear that this Government are doubling the rate of landfill tax. It seems to come down to the combination of smart regulation and tax. I suppose this goes back to what we talked about at the beginning of the session: if you want to encourage zero waste, create products that last, create products that can be recycled and dismantled easily and so on, that comes down to a different approach to producer responsibility and taxation—things which the current narrative of this Government seems to be moving away from.

Mrs Spelman: We are not moving away from it.

Chair: I think the Economic Secretary wanted to answer that.

Q232 Zac Goldsmith: I accept that you are talking about the quality of regulation, but it is unavoidable.

Mrs Spelman: I don’t accept that we are moving away from it, and I cannot let that go without saying so. Something missed out in the list of good things that we are working on, of course, is the voluntary agreements. Take the Courtauld Commitment, for example, which has had a tremendously good impact on reducing packaging and increasing the amount of recycling. There is a willingness on the part of business to do this, because it makes perfect economic
Mr Lawrence just reminded me that Mrs Spelman: this Government have set that up. Of innovation and technology that we will need, and other areas. It is absolutely open to promoting the kind of growth, as Mr Spencer mentioned.

My third big example of policy is the Green Investment Bank. Again, that is absolutely not just carbon. It looks right across waste, but also at many other areas. It is absolutely open to promoting the kind of innovation and technology that we will need, and this Government have set that up.

Mrs Spelman: Mr Lawrence just reminded me that we should not sneeze at the impact of these voluntary codes. Phase 1 of the Courtauld Commitment saved £1.8 billion as part of that voluntary code of conduct, so there is a very real win-win there for the economy and the environment.

Q233 Zac Goldsmith: One final point. If the voluntary approach works, it is obviously preferable to a heavier approach involving the state, but equally there are examples of where the voluntary approach has not worked. With plastic bags, for example, we have seen a dramatic reduction in their use despite endless promises by the big supermarkets. A voluntary approach works best when it is backed up with the threat of legislation. Where your default position is to try for a voluntary approach, it has to be backed up with a very serious threat that you will step in if necessary.

Mrs Spelman: There is more than one tool in the toolbox to drive this kind of behavioural change. In relation to single-use carrier bags, the Commission is looking and consulting on that across Europe. Different member states have tried different approaches, and even within the United Kingdom we are seeing different approaches in the devolved Administrations. We can learn from their experiences as to what works best, but it is a combination of the tools in the toolbox. We certainly prefer the voluntary approach, and it has been used on a number of occasions. As you say, if this does not work, we will look for something that will work better, but we should always be looking for better regulation as part of it.

Chair: We wanted to come on to regulation on voluntary arrangements a bit later, but I think we have some questions relating to this from both Peter and Mark.

Q234 Peter Aldous: The Treasury Minister mentioned the Green Investment Bank and extending the remit to get involved in a wide range of projects. In making that decision, have you had regard to the fact that perhaps the Green Investment Bank might be more effective in helping the transition to a green economy by concentrating on one or two or three original initial projects, which was very much what the original report suggested?

Miss Smith: Do I understand your question correctly? Are you saying that it should focus on one project only?

Q235 Peter Aldous: No, if I correctly picked up what you said, you were saying that the remit of the Green Investment Bank was being extended so that they could get involved in a wider range of projects.

Miss Smith: Wider than carbon was the point that I was making.

Q236 Peter Aldous: I would just pick up on the original report, which came before the creation of the Green Investment Bank. The recommendation was that, to be effective, it should be concentrated on two or three things to start off with.

Miss Smith: I do not think that is incompatible with what I am saying. It is absolutely the case that it has to have a small number of priorities to be successful. I think that is a sound business principle, and I am sure that my colleagues in BIS will ensure that that occurs as we go through to implementation.

Mrs Spelman: We are particularly pleased that waste is included in the first phase of the Green Investment Bank. We think it offers great potential, with Green Investment Bank seedcorn investment to help that highly innovative industry. We are pleased to see it included in the list.

Peter Schofield: To build on that, the Department for Business, Innovation and Skills has set out what it regards as the strategic sectors that really matter for the Green Investment Bank. As the Secretary of State says, they include energy from waste; they also include energy efficiency. It goes wider than just carbon, but still retains the focus.

Q237 Mark Lazarowicz: On the question of the voluntary approach and whether other tools in the toolbox need to be applied, the document, Enabling the Transition to a Green Economy had a lot that businesses were expected or asked to do. That is basically a mixture of a voluntary approach. What mechanisms are in place to monitor the implementation of that report? If businesses, for example, are not investing in infrastructure to support the green economy to the degree that we would like, at what point will consideration be given to measures to make them do so, or to make it less voluntary? How will you monitor the process?
Mrs Spelman: The Green Economy Council, which asked for the road map, meets on a regular basis. The advantage is that we get the opportunity to monitor on a regular basis what sort of progress they are making. One reason for mapping it out, by the way, is quite important. I know this looks like a difficult chart, but it is really about sequencing. There are two things they wanted: a degree of certainty about what we would do over a period of time, and some assurances that we would sequence things in such a way that is manageable for them to cope with. Business makes the point that different Departments sometimes come forward with regulations to implement all at the same time. They make it difficult for business to cope with three coming along at once.

The road map sets out and synchronises the work across Government Departments to transition to a green economy. One thing that we will do in our regular meetings with the Green Economy Council is make sure that we are making the progress that the road map anticipates. So it is a monitoring as well as a signposting vehicle.

Andrew Lawrence: Maybe it is worth trying to explain why, on resource efficiency and so forth, the opportunity—businesses seeing and taking opportunities and then going ahead and making commitments on their own behalf. A lot of major companies have, and that is also very much the thinking behind the Ecosystem Markets Task Force, which the Secretary of State set up and which will report to the Green Economy Council, bringing together business people to identify those opportunities. So for businesses, it is almost a no-brainer to move ahead and take advantage of the opportunities and bottom-line benefits that are there for them to accrue.

Q238 Caroline Lucas: I want to go back to the issue of growth for a few moments, because it seems to me to be at the heart of this inquiry on the green economy. When Mark Spencer basically asked, “Can we go on growing indefinitely?”, I think, Secretary of State, that you said something like “it’s not whether we grow; it’s how we grow.”

Clearly, it’s better if we are growing in a more environmentally friendly way than if we are not; but I wonder if you would accept that there are, ultimately, finite limits. I know that you have talked about efficiency and innovation, and those are important too, but at the end of the day, the economy is a subset of the wider ecology, not the other way around. I appreciate that that is a difficult thing to start implementing in policy documents here and now, but I would be interested to know whether any thinking about that is going on in the Treasury or DEFRA—the kind of thinking that Tim Jackson, for example, set out in his report Prosperity Without Growth? when he was with the Sustainable Development Commission.

The truth is that however more efficient we become, if the total number of cars on the roads or planes in the sky is increasing, that efficiency is outweighed and undermined by the total amount of growth. As long as we go on thinking that the ultimate end of an economy is just to get bigger and bigger, in a way, we are on a hiding to nothing. There are some shocking figures saying that, in a world in which 9 billion inhabitants all aspire to the level of affluence in OECD nations, we would need an economy 15 the times the size of this one by 2050 and 40 times this one by the end of the century. Sooner or later we are going to have to change our economic model. I would just like to know if there is any debate going on about that anywhere in Government.

Mrs Spelman: Of course there is debate about it.

Q239 Caroline Lucas: But where? Where can I see it?

Q240 Chair: We want specifics on it.

Mrs Spelman: Can I just answer? Sorry, I didn’t quite catch what you said. Chair: I think we want specifics on where the debate is taking place.

Mrs Spelman: Okay. Specifically, that is why we published the national ecosystem assessment, one of the world’s first such assessments for any individual country. Its headline finding was that 30% of our ecosystems are in long-term decline. It also revealed the immense range of benefits that can be gained from ecosystems, so in terms of dealing with finite resources, we are obviously trying to transition away from finite resources to renewable resources, so that we can continue to grow sustainably. Where we need to reverse a trend, where an ecosystem service is in decline, we need to find an alternative solution that measurably restores the damage to the ecosystem. One thing—a piece of good news—that came out of Pavan Sukhdev’s work on the economics of ecosystems and biodiversity was that quite a lot of the damage can be reversed. A gain, when that is achieved, it helps sustain growth.

A nother specific thing is that we are going to set up the Natural Capital Committee—we are already interviewing for the Chair of that Committee—which will report to the Economic Affairs Committee, chaired by the Chancellor. Again, it is an opportunity to quantify what we need to change and by how much, to reverse environmental degradation and change behaviour, so we start restoring our ecosystems, so they can sustain growth.

Q241 Caroline Lucas: But with respect, Secretary of State, the word “growth” keeps coming up. I am trying to ask whether any deliberation is going on anywhere in Government about a different paradigm, based on Prosperity without Growth?—the title and focus of that report by the Sustainable Development Commission, by Tim Jackson.

Mrs Spelman: I do not accept the hon. Lady’s view that we cannot grow sustainably. All the work of the Government is directed towards transitioning our economy into one that is green and sustainable.

Miss Smith: Just to reinforce, if I may, that economic growth remains the primary objective of the Government.

Q242 Caroline Lucas: Just for the record, can I point out the way in which “growth” is being used as a proxy for “well-being”? There is so much research out there to suggest that there are better ways of achieving
Andrew Lawrence: If I may add to that, the well-being agenda is not just about growth, but economic prosperity is one element of well-being. They have published the results of their work on that. These two things are integral—growth and well-being are linked together. One is not a proxy for the other, and I do not accept that analysis.

Peter Schofield: Just to build on that, the Office for National Statistics is taking forward quite a lot of work on that. They have published the results of their work, in terms of what people think matters from the point of view of well-being, and they have identified the key factors. As the Secretary of State says, it is not just about growth, but economic prosperity is one element of well-being.

Andrew Lawrence: If I may add to that, the well-being indicators that they will be generating through the course of this year will be aligned with the Sustainable Development Indicators that we publish from DEFRA, so we are very much involved with that.

Caroline Lucas: I would love us to have more time to debate, but may I ask one other question?

Q243 Chair: Before we move on to what I know you want to ask about, can I just ask, in terms of what was just said, where the thinking is in terms of the Office for Budget Responsibility? You have talked about the ONS but clearly the remit of the Office for Budget Responsibility does not include, as things stand, the sustainable development issue. It would be very interesting to know how you will include natural capital in the national accounts, so there is a basis then for long-term planning, based on sustainable development.

Miss Smith: Both bodies in question—the ONS and the OBR—are, of course, independent bodies, both accountable to Parliament.

Q244 Chair: But set up by Government to do a certain function.

Miss Smith: Indeed, but independent in doing that function. They are both accountable to Parliament in their separate ways; the ONS through the national accounts, and the OBR through forecasting and further budgetary monitoring. The answer, I am afraid, to your question is that the Government would not be in a position to tell them how to do their independent jobs. I appreciate where you might wish that to occur—

Q245 Chair: In relation to Caroline Lucas’s questions, if you go back to debates on, for example, energy, and the role of the regulator, it seems to me that if you were looking at long-term thinking in the Treasury about how you link well-being and finite resources, and how you link that to the economic debate, setting up a body that is independent of Government and has no remit for sustainable development will not assist you with the thinking when the Office for Budget Responsibility is putting them on to a different trajectory, which is just looking at sustainability in respect of economic viability.

Miss Smith: To be fair, I suspect you would criticise if the OBR did assist us too much. I am afraid the point I want to make is that we are not in a position to ask them to take one measure over another in the way that they do their work.

Chair: No, but you chose to give them a remit that did not have that in its terms of reference.

Peter Schofield: May I help the Committee on this? As the Minister says, there are two separate bodies here. The Office for National Statistics, as I said earlier, is doing a lot of work.

Chair: I was talking about the Office for Budget Responsibility.

Peter Schofield: Sure, but the Committee referred to the national accounts, which are the responsibility of the Office for National Statistics. It produces statistics in line with internationally agreed norms as to how national accounts should be put together. The Office for Budget Responsibility is charged with a specific purpose under the Budget Responsibility and National Audit Act 2011. Under that Act, it is required to examine and report on the sustainability of the public finances. That is the remit as set out. It is obviously possible for Parliament and, indeed, this Committee to suggest to this independent body that it meets that remit in a particular way. How it meets that remit is the responsibility of the Office for Budget Responsibility itself.

Q246 Caroline Lucas: I want to ask the Treasury Minister about the kind of investment climate that we are creating here for green industries. Everything that we know, and what is in this document as well, talks about the importance of predictability and certainty and so forth. How does the current court case affect that when we are looking at the FITs issue, because the court case on feed-in tariffs is not really about feed-in tariffs per se. It is about whether it is okay to change the investment rules retrospectively. That is what the Government are now contesting at the Supreme Court—whether it was right and proper to be able to change the date retrospectively for when the new FIT rate came in. Can you share your reflections on what kind of signal that is giving investors in the UK?

Miss Smith: The short answer is no, I cannot share those reflections, because it is a legal matter at present.

Caroline Lucas: That is awfully convenient.

Miss Smith: I am sorry, but it is wiser if I do not attempt to answer your question.

Mrs Spelman: I am sorry; I wanted to come back to something on the ONS. We are working with the ONS on how the environment can be better incorporated into national accounts. In 2012, we are going to publish a document with them for coming improvements up to 2020. I want to remind the Committee that in November 2010, it was the Prime Minister who asked the ONS to develop measures of general well-being to complement our understanding of GDP growth, and it launched a consultation on...
what matters to you. The important thing is that it identified six themes, which included having good connections with your friends and relatives; health; job satisfaction; having a good relationship with your spouse or partner; economic security; and the present and future condition of the environment.

If you stand back and think about those six themes, most directly relate to the greening of the economy: job satisfaction, economic security and future condition of the environment. So, we are working very closely with the ONS on this. The appointment of the chairman of the natural capital committee is imminent. It will be another very important advance in our understanding of factoring the value of natural capital into our Government accounting, so there are things to look forward to.

Chair: I will let Caroline Lucas resume.

Q247 Caroline Lucas: Briefly, the national infrastructure plan announced that over £1 billion would be invested to tackle areas of congestion and improve the national road network. Also, we know that the Government are looking at ways of maintaining the UK’s position as an international aviation hub. What are the Secretary of State’s reflections on the extent to which those measures are compatible with the green economy?

Mrs Spelman: Certainly they are. You may want to talk to the Treasury about this as well. Remember that one of the key things about infrastructure is that we need to adapt it to the challenges of climate change and other big challenges facing our economy and our society. It is difficult to get away from the fact that the increasing cost of fossil fuel means that people are increasingly resorting to public transport, and you see in the decision that the Government have made with respect to High Speed 2 a commitment to sustain growth and sustain our economy by renewing our rail infrastructure. One cannot simply say, “We don’t need to invest in the roads.” We know there is terrible congestion at particular pinch points, and where there is congestion, it has an impact on air quality. Again, if we are to marry up our concerns for people’s well-being, their health and the sustainability of the economy, of course we have to invest in the infrastructure to make sure that we get a win-win out of that.

Q248 Caroline Lucas: How can building more roads be the best way of dealing with bad air quality? That seems a bit counter-intuitive to me. More roads mean more traffic on the roads, which means worse quality.

Mrs Spelman: I think it entirely depends on where you make the investment. As I said, there are points of congestion where it is right to make an investment, which will have the benefit of easing the flow of traffic, helping to improve air quality and supporting sustainable growth.

Q249 Caroline Lucas: Has your Department done an assessment in the public domain on the impact of that road-building proposal?

Mrs Spelman: We provide support to other Departments, such as the Department for Transport, in the work that we undertake. For example, on the proposals for High Speed 2, we have offered to work actively with the Department for Transport on the route that they plan for high speed rail, looking not just at the impact of the mitigations that they propose, but at the parts of the route that require biodiversity offsetting, because mitigation is not possible along the entire length of the route. I think that offers something really significant. Our Natural Environment White Paper states that biodiversity offsetting should become a feature of development and sustainable growth. That project is a prime example of where a significant step change in biodiversity offsetting could be achieved, and I am working closely with my colleague at DFT to help to achieve that.

Q250 Caroline Lucas: Could you give the same level of answer on the road-building programme, too? Did you use the same enhanced impact assessment set out in the Natural Environment White Paper to assess the environmental impact of the road proposals?

Peter Schofield: Should I answer that one? It is fair to say that each and every public sector infrastructure project goes through an assessment process, which has to take account of all the benefits and costs, which include the environmental impact. That process follows the Green Book guidance. Each and every one of those public sector projects, including the national infrastructure plan, will go through that assessment.

Q251 Caroline Lucas: Does that get done within DEFRA, or does that get done within DFT or some other Department?

Peter Schofield: That gets done by the Department responsible for the project, following guidance every Department has signed up to.

Q252 Caroline Lucas: What I am trying to get at, in terms of joined-up government, is the practical extent to which people from DEFRA are involved in the process, or whether it is a template that other Departments use that has been agreed previously. How hands-on is the involvement?

Mrs Spelman: We should not overlook the fact that a new Cabinet Committee has been set up to take forward the national infrastructure plan. I have not been in government as long as you, so I would not know how it was like not to have Cabinet Committees, but all I can tell you is that I think the Cabinet Committee structure is extremely good. It means that Cabinet Ministers meet more often than just at Cabinet once a week. We regularly meet in these cross-cutting Cabinet Committees, which I think is the ideal structure to take forward the national infrastructure plan. The Cabinet Committee structure means that I will be there to put the perspective of DEFRA and to make other Departments aware of the environmental impact, which leads to better decision making. That is the kind of joined-up process that you want.

Peter Schofield: It is also important to say that by no means is the national infrastructure plan just about roads. If you look through the document, there are sections on each major element of infrastructure. Each section starts with a vision that is very much consistent with the move to a low-carbon, green economy. For each of the projects listed, the document
May I give some support to that? The national infrastructure plan, which the Treasury published, has a really important table, table 1.C, that perfectly shows sustainable development in action. It not only covers the road for the purpose of people driving along it, but brings forward the questions of road safety. On rail, it talks from the point of view not only of moving people from A to B, but of well-being aspects, such as passenger crowding. The sectoral performance not only takes on board transport infrastructure, but asks us to look at water, sewerage, waste and flood defences. If we are going to mainstream sustainable development, this national infrastructure plan demonstrates clearly and publicly that sustainable development is embedded in the infrastructure planning.

**Miss Smith:** May I add a short section? This document, which I have here as exhibit B—I think that is where we are up to—underlines the Government’s commitment to their legally binding Department targets and their other environmental goals, which we are discussing at length today. It does it by the means that Peter and my colleagues have described already. It is embedded through each section of the document. It is embedded through each section of the document. It demonstrates how much this is a part of an overarching priority, which is to, as I have already said, have economic growth, unashamedly, but also to ensure that it is green and sustainable growth, using our resources in a sensible way.

**Q253 Martin Caton:** Economic Secretary, continuing on the relationship between Departments, what was the Treasury’s role in developing and enabling the transitions?

**Miss Smith:** I am sorry, I could not hear you.

**Martin Caton:** What was the Treasury’s role in producing the road map, enabling the transition?

**Miss Smith:** The Treasury was certainly engaged at an official level and, as the Secretary of State has already said, it was led by the green economy group, which then moved into the Green Economy Council, which she and two other Secretaries of State chair. It was thought appropriate, just for the record, that those three Secretaries of State were the signatories therefore to it. In case your question is asking why the Treasury was not one of the signatories, I answered that proactively. It is absolutely a cross-Government, joint-agreed and supported document.

**Q254 Martin Caton:** In that case, do you plan to incorporate provisions from Enabling the Transition into the Government’s future versions of the Plan for Growth?

**Miss Smith:** I am sorry. Will we incorporate parts of that into the whole thing?

**Q255 Martin Caton:** Yes. Either the whole thing or provisions within it into the future Plan for Growth.

**Miss Smith:** As I say, I think that the principles of that will be throughout what we do, so on a qualitative level, the answer is absolutely. As has already been said, the Plan for Growth and the national infrastructure plan under the aegis of the Autumn Statement, which sat together, are being reviewed appropriately by Cabinet Committees, which is a sound level of oversight, shared by the Chief Secretary to the Treasury. I think that that will provide them with a forum to ensure that such goals as this are then seen throughout the planning.

**Mrs Spelman:** In terms of the preparation of this, the green economy group, which the Economic Secretary referred to, consisted of director-general level civil servants from the Treasury, DEFRA, DECC and BIS. The interdepartmental group on the green economy and growth was made up of the senior economists from the Treasury, BIS, DECC and DEFRA. We do operate together, which is why I think the Treasury has benefited working in that way. The outcome—the road map—is the better for the input from all four Departments.

**Miss Smith:** As we hope you saw from the officials’ session that you had sometime earlier.

Q256 Martin Caton: Moving to the green economy may increase short-term costs, with investments needed to reduce resource consumption, as you have mentioned already, and emissions. Some of the cost will count as public expenditure, presumably. How much higher will public spending be, up to 2014–15, because of measures in the road map?

**Miss Smith:** I think it is quite important to first say that that document is not so much about announcing new initiatives, which could be broken down into a priced table. It is, instead, about setting out the principles by which Government and business should be working together. If I may suggest it, a more appropriate way of putting publicly spending in that sense would be to look at the announced policies, such as I gave to Mr Goldsmith before, which will absolutely have their price tags and can be seen in Budget and Autumn Statement documents.

**Q257 Martin Caton:** Can I ask, then, is the Treasury committed to finding funding to move towards the green economy?

**Miss Smith:** Well, absolutely. I again refer to the examples that I have already given. They are there, they are committed and they are under way to implementation and they have been there for all to see in Budget and Autumn Statement documents.

**Mrs Spelman:** Right at the big end of the scale is the £3 billion for the Green Investment Bank. The Chancellor was the first Chancellor to identify that sort of money for green investments. There is £200 million being made available for the Green Deal so we can adapt existing housing, which is going to make a very big difference to our ability to meet our carbon emissions target. Running down to some smaller-scale decisions that are just as important at the local level, there is the £15 million fund from the Rural Growth Review as part of the Autumn Statement for a Rural Community Energy Fund. Taking the model that works extremely well in Scotland, it is a loan fund where communities can draw down from that fund to establish a renewable energy capacity in their community, which provides an income stream that
allows them to pay back that loan. Right across the piece, we have got investments, despite hard times, through the Treasury commitment to make sure that we do green our economy at every level.

**Miss Smith:** If you were to look back at the Stern report—a very sound rationale for taking action in this area—he laid out very clearly that the costs of not acting far outweigh the costs of acting in the short term. The Government accept that point, understand it and wish to incorporate it in the actions that we take. That means—I hope this is clear—that we accept that we have to put in place measures, which involve public spending at times, to deal with things now.

**Q258 Martin Caton:** You mentioned hard times, Secretary of State. Is our current economic situation delaying the shift to a green economy?

**Mrs Spelman:** It has not delayed our shift to a green economy, because it is driving change. It is absolutely the right time for companies to be more resource-efficient. The combination of the rise in commodity prices and the need to innovate and grow their businesses is a very strong driver on businesses to become more resource-efficient. It is a time when business is particularly receptive to the message of the benefits that come from greening the economy. The enthusiasm of the Green Economy Council members to espouse this, share their best practice and actively promote it both at home and abroad is testament to the fact that this is the right time.

**Q259 Peter Aldous:** We have just received the Government’s response to the Report that this Committee produced on the Budget 2011 environmental taxes. It took seven months to get to us. Can I ask the Treasury Minister why it took so long?

**Miss Smith:** As I say, we are working on the definition. The second part then can be to promote it both at home and abroad is testament to the fact that this is the right time.

**Q260 Peter Aldous:** Some people might jump to the conclusion that there might be disagreement in Government on how to respond. That would not be correct, then.

**Miss Smith:** Governments have to act collectively, of course, and talking to each other takes time. I think the transition to a green economy?

**Q261 Peter Aldous:** Might some Departments have that we take pride in doing that. Some of the examples we have already given show course, and talking to each other takes time. I think the transition to a green economy?

**Q262 Peter Aldous:** Thank you, Minister, what role do you see environmental taxes playing in supporting the transition to a green economy? **Miss Smith:** I think there is a very clear role. As I say, with reference to my previous answer, there is of course a question about the piece of work that we are working on to get a workable definition, but the point is that the Government appreciate at present the indicators that environmental taxes can be seen to give. We will also further explore the opportunities to go greener within our taxes. We have already spoken about tax and regulation, as well as the voluntary approach, as some of the levers available, and the Government certainly see environmental taxation as important, albeit we are working on a piece of work for it.

**Q263 Peter Aldous:** How are the Government delivering on the coalition agreement pledge to increase the proportion of tax revenue that is accounted for by environmental taxes?

**Miss Smith:** As I say, there is a piece of work that we have committed to the Committee to do. You had my predecessor here in May 2011 discussing the broad principles that should go into such a definition of environmental taxation. The first part of the exercise is the definition. The second part then can be to commence tracking on an appropriate definition.

**Q264 Peter Aldous:** Is there any time scale on those two aspects of the work?

**Miss Smith:** As I say, we are working as hard and as fast as we can to get a definition that works. I would just highlight, so you are fully aware of the complexity there, that there are definitions in use already by both the ONS and the OECD, but they are different, crucially. There is not, I believe, a full consensus on what environmental taxes are. If you look internationally, they will, of course, be different for every single economy, because every economy does things very slightly differently. So there is a job of work to do to get a really workable, robust definition on which we can then carry forward our hopes.

**Q265 Peter Aldous:** So, to wrap up, when the Committee makes its report on the Budget 2012, perhaps we can hope for a response a little more quickly than in seven months, and perhaps we might have taken that particular issue on environmental taxes and their measurement a little bit further forward.

**Miss Smith:** I am sure that the Committee will always appreciate fast responses.

**Q266 Martin Caton:** I think it’s very disappointing that a Treasury Minister can’t tell us, or even give us some sort of indication of, the time scale for when it can come up with this new definition for environmental taxation, when increasing environmental taxes has been given some priority by the Treasury. Can you not give us any indication of when this review will be completed?

**Miss Smith:** As I say, we are working on the definition. I have tried to lay out why it is taking time. It is not a magic-wand question; I suppose those things rarely are. Please be reassured that in taking over from my predecessor, I am absolutely working onwards from the broad principles that she set out for you here last year. Also, as you just said yourself, Mr Caton, the Government are already taking action in introducing more environmental taxes, particularly in the sense of the carbon price floor.
Q267 Martin Caton: So in the meantime, is your definition of environmental taxes the same as the previous Government's?
Miss Smith: As I say, we are working on the definitional question and hope to return to the Committee as soon as possible.

Q268 Chair: But can you not understand our concern? We did an inquiry, and we have waited longer than we should have done for the Government's response, but the worst part about it is that there are at least four aspects of that which appear not to have been addressed. What this Committee is concerned about is where the Treasury's overarching environmental taxation strategy is. It is that which we have concerns about.
Miss Smith: I do appreciate that. As I say, we are working as hard as we possibly can to address that for you.

Q269 Dr Whitehead: Does that mean that as a result of the work on that definition, it will be impossible thereafter to compare anything that we do as far as green tax is concerned with any other OECD country?
They all run on a common definition at the moment, which was in fact derived from the ONS definition in the first place.
Miss Smith: I think your question is quite hypothetical, isn't it? If I am not able to give you a definition, I am not quite able to answer your question, but in general principle, of course you would wish for a workable definition—as I said in my previous answer—that is robust, that stands up to scrutiny and allows for appropriate comparisons.

Q270 Dr Whitehead: Who would define appropriate comparisons at that point?
Miss Smith: As I say, I am undertaking that definitional work at present.
Chair: I am conscious that earlier on, we covered some of the voluntary aspects. I just wanted to check whether there was anything—
Mark Lazarowicz: I have nothing more to add.

Q271 Simon Wright: In this document, Enabling the Transition, we have heard a number of times that the added value that this brings, essentially, is to bring together policies related to that transition in one place for businesses. I just wonder on what basis some policies may have been left out of this document. For example, some of the actions within the Natural Environment White Paper are not specifically pulled out in the document. Neither is the national well-being project. Can you say a bit about what is not in here that might be relevant to business, and why it is not included in the document?
Andrew Lawrence: I think all actions from the Natural Environment White Paper are in the link through from this document into the Natural Environment White Paper. What we aimed to do—we discussed this a little bit when I was before this Committee last year—was create a document that was not a heavy carry-around but an opt-in document, principally an online version, that people could then navigate.

The Natural Environment White Paper, in its entirety, is available through the document, and the headlines are signalled through the front of the document, and also where we go into the overarching policy framework. Everything is in there and available to people who want to read it. I am not aware that we missed out anything at all.

Q272 Simon Wright: I can certainly see that the White Paper is on the timeline, so your argument is that, if you are reading this online, you click on that and it would take you on?
Andrew Lawrence: You hover over it and it will tell you what the Natural Environment White Paper is; then there is a link in one of the annexes which, if you click on it, takes you straight to the DEFRA website, where you will find the entire White Paper. That is the format we followed for essentially everything we refer to. If they were all bundled together, the document would be enormous. This was designed to be a quick online guide so that people could get to everything they could possibly want to know without having to carry around everything they did not want to know as well.

Q273 Simon Wright: Mr Lawrence, you referred earlier to the Ecosystem Markets Taskforce, which will look at the opportunities for businesses to develop new green products and markets. Which Department will ensure that the taskforce makes practical recommendations that businesses of all shapes and sizes can actually adopt?
Mrs Spelman: It reports into all three co-chairs of the Green Economy Council—DECC, DEFRA and BIS. The taskforce has already had two meetings, in addition to the launch. Its chair is Ian Cheshire, Group Chief Executive of Kingfisher Plc. It has already identified some interesting areas for ecosystem services, new markets and products. As much as anything, I think the taskforce will help to promote best practice—it will uncover best practice and come up with a good method of sharing it. A good example of that would be payment for ecosystem services by water companies: a couple of them do it already and we would like the taskforce to actively promote with other water companies the adoption where appropriate of those models, new products and services. The taskforce has already started its work, it reports to the Green Economy Council and we look forward very much to hearing its other suggestions.

Andrew Lawrence: To be clear on when it has committed to report into the Green Economy Council, it is March 2013.

Q274 Chair: May I interrupt and ask whether there is a way in which funding can be guaranteed for the proposals that come out of that, whether that is through BIS or the comprehensive spending review? What is the Treasury input to make sure that where there is innovation or the possibility of innovation, new technologies, or new means of production—for example, in recycling or reuse—there is not only the business idea but provision of the gap funding to get it to market?
Mrs Spelman: It does not always require state funding—let us be clear about that. The example I just used does not require state funding.

Q275 Chair: No, but it may need incentives—Treasury incentives.

Mrs Spelman: Well, it might do. Waste, for example, qualifies under the Green Investment Bank for investment funding. There are funding vehicles across Government, but what is exciting about the Ecosystem Markets Taskforce is that these are businesses that, by coming together and sharing, are uncovering market opportunities that do not require subsidy. It is a question of raising awareness of those opportunities and, essentially, getting the market to work. If you take payment for ecosystem services as the example, if you pay a farmer to farm in a different way in a river catchment area, it costs the water company less downstream to clean up the water. The state does not need to get involved in that.

Q276 Chair: I am not necessarily talking about state subsidy, but there are ways in which, through the Treasury, there can be incentives to get different business models. That needs to be linked into the Treasury’s consideration of incentivising certain behaviours where we need to get a paradigm shift in processes.

Mrs Spelman: Sure, but I do not think it is the primary function of the Ecosystem Markets Taskforce immediately to look to the state to fund everything they come up with. They are realistic about the spending situation. That does not mean their proposals would be excluded from the funding capacity the Government have; it is just that it would be good if a market-led solution could be found. Do you want to add to that?

Miss Smith: Sure; if it is helpful, I can name a couple of funding mechanisms that might be of use in some of those instances, with the right applications and checks and so on. They include the Technology Strategy Board, which Peter mentioned, and the Green Investment Bank, which we have covered in some detail; but the Regional Growth Fund may also be relevant to some of these cases, and on a very general canvas, there are many ways in which the Treasury seeks to support small, medium-sized and entrepreneurial businesses. Indeed, the Department for Work and Pensions is also involved. There is certainly cross-Government effort and awareness of the need to encourage innovation, and through it economic growth.

Q277 Simon Wright: Going back to an earlier discussion about the inclusion of natural capital in the national accounts, will that information be there purely for informative purposes, or can we expect it to be fed into some sort of fiscal mandate-type mechanism, with targets being set so that stocks of natural capital are maintained?

Miss Smith: First, as we have said, the ONS is an independent body that provides information—that is its stock in trade—so first and foremost that is a set of data that is available to Government. It will then pop up in various decisions relating to the Green Book process, which Peter has already described. Would you like to go into more detail?

Peter Schofield: Yes. In terms of the fiscal position, to which I think you are referring, Mr Wright, this goes back to the role of the Office for Budgetary Responsibility. I described earlier that body’s remit and obviously it is up to the OBR to use whatever data seems appropriate, whether from the ONS or other sources, to help it to meet that remit.

Mrs Spelman: I felt you were not quite catching the question. The Natural Capital Committee is what you asked about, wasn’t it, not the ONS? The Natural Capital Committee reports into the Economic Affairs Committee, which is chaired by the Chancellor. What it brings is an understanding of the value of natural capital, and we now have the scientific tools through the national ecosystem assessment that allow us to calculate the value of the natural capital. Immediately, what that does is provide information based on which you can make better decisions. The first thing that will happen through the Natural Capital Committee is that we will base our decisions on a better understanding of the true value of the natural capital involved.

Chair: I think that brings us to the end of the session. When we planned it, we were not aware that half an hour would be taken by Divisions, so thank you for the extra time you have given us. Hopefully, we shall have made some progress on the inquiry.
Written evidence

Written evidence submitted by Green House, the environmental thinktank

Green House greatly welcomes the Environmental Audit Committee’s inquiry into the Green Economy. This is our response.

Summary

— A “green economy” is not a globalised market economy producing a slightly different range of products; a green economy would be an economy whose design was compatible with the primary constraint on human life: that we live within ecological limits.

— The central change that a green economy requires is from considering the economy, environment and society as intersecting but separate to recognizing that the economy is located within society, which is in turn embedded within the environment.

— A green approach to the economy would seek to move the target of our economy away from economic growth and towards flourishing, convivial human communities which do not threaten other species or the planet itself. In place of economic growth we should move towards a steady-state economy.

— As demonstrated by the report Prosperity without Growth by the Sustainable Development Commission, we reject the idea that “business as usual” can lead to a sustainable future. The sorts of increases in energy and materials efficiency required to ensure our current level of consumption at a sustainable rate of resource use are simply not feasible.

— Permaculture principles are useful in guiding economic developments: for example, we will have more examples of closed-loop economics, where the consequences of our economic decisions impinge on us directly rather than being exported to other distant communities.

— In a green economy businesses will need to learn from the ways of nature, hence the importance of closed-loop production systems and biomimicry.

— A green economy is likely to be dominated by co-operative businesses, guided by humane and respectful principles and values, rather than corporations, legally constrained to maximize value for shareholders.

— A green economy would not rely on lengthy supply chains for the provision of basic goods and resources, but rather would be based around a system of self-reliant local economies.

— A green economy is likely to focus more on livelihoods than simply on the labour-market, and opportunities should be made available for citizens to meet their own needs, especially by opening up access to land.

Background

GH1. The Committee has listed a series of themes upon which they invite evidence. Broadly speaking these are looking for medium term policies, say over 10 years, which will assist the development of a Green Economy. That is an understandable, sensible and practical approach, but we note too that the Committee has specifically not just sought views on these issues, but says that “more wide ranging responses are also welcome”. This is largely a wide ranging response.

GH2. When setting off on a journey, and even when negotiating the first few miles, the most important thing is the ultimate destination. The ultimate destination in this case is the economy we want and will be part of in maybe fifty years time. It is worth examining the dominant paradigm about the supposed nature of that economy, as exemplified by the Stern Review:

— that globalisation and competition within free markets should and will continue and strengthen;

— that economic growth in real GDP will continue at around 2% per annum, and that this growth should be the principal aim of economic policy;

— that the UK can continue with a broad economic strategy of a dominant internationally focused financial sector, a large service sector, some high technology manufacturing and a small agricultural sector;

— that the energy sector in particular will be transformed by the widespread introduction of renewable technologies and the wider use of nuclear power so that energy remains cheap and plentiful;

— that we will find viable technological solutions to other environmental problems such as water supply, the effects of climate change, pollution, lack of space for housing and the threat of development to our wild places;

— that the UK economy will and should continue to occupy a powerful position in the world economy through the skills of its workforce and the UK’s political and military power;

— that the UK will continue to be able to import sufficient cheap food and animal feedstuffs so that combined with our own production our growing population can continue to eat as we do now;

— that continuing growth and high employment levels will allow most poverty to be eliminated in the UK without restraining higher incomes and wealth levels; and
that continuing growth will allow a significant reduction in global poverty.

GH3. Green House believes that all these propositions are wrong. On the contrary we think the consequences of the financial and ecological crises we are living through will transform the UK economy over the next several decades into one which has the following characteristics:

1. The onward march of globalisation will have been challenged by rising fuel prices and the consequences of climate change;
2. The high cost and relatively limited availability of non-renewable energy and other finite material resources will have brought material growth in the economy to a halt, and with it growth in real money GDP;
3. The challenges to globalisation will mean that in the UK we will need a more self-reliant economy, with more emphasis on primary and secondary sectors, and with a significant increase in the size of the agricultural and manufacturing sectors;
4. That the other environmental problems that have been over-shadowed in recent years by climate change and carbon dioxide limitation are not all susceptible to technological fixes, and will constrain our way of life, for example in terms of how many houses we can build and how much water we can use;
5. That agriculture and food growing generally will have become more significant to our national economy than at present, generating a significant increase in employment in farming, primarily organic farming, and leading to a greater number of people living in the countryside;
6. That the UK’s ability to take an excessive share of global resources will have been reduced; and
7. That the international pressures on our national economy will have raised serious questions about equality of incomes and wealth, and about the structure of the labour market, specifically about working hours.

GH4. This may look like bad news but we believe the contrary: that it is perfectly possible for all to live the good life in a smaller, thriftier, more equal and sustainable economy.

Discussion

GH5. This year marks the centenary of the birth of E F Schumacher: in the 36 years since he published Small is Beautiful we have seen an acceleration of species loss, rapidly rising carbon emissions, and the depletion of a range of essential resources. If the evidence of ecological damage were sufficient to change how the economy is structured, we would have expected to see a significant response on the part of policy-makers before now. We need to recognize that there are powerful interests that benefit from the existing structure of political economy rather than management.

GH6. Over the past few years the issue of climate change has moved from a peripheral concern of scientists and environmentalists to being a central issue in global policy-making. This is but one of many indications that our economy is in fundamental conflict with our ecological systems; it was these indications that stimulated the development of a green approach to the economy. Greens have also been concerned about the way an economic system based on competition has led to widening inequalities between rich and poor on a global as well as a local scale, and the inevitable tension and conflict this inequality generates. This is intrinsically related to the inability of the economy to stay within ecological limits, and hence the two motivations for the development of a green economy are intertwined.

GH7. Nicholas Stern famously identified climate change as the greatest ever example of market failure. Climate change is only one, although clearly the most serious one, of the many environmental crises we are facing. In the discourse of orthodoxy each of these is an independent example of “market failure”, the solution being merely to strengthen property rights and extend the reach of the market, as in proposing carbon trading as a solution to climate change. For a green economist, by contrast, the strict market ideology itself is the failure, and beneath that failure lies a deeper failing of our society to recognize and celebrate its place within a living, breathing planetary system.

GH8. From the science of ecology we learn that we are all connected in a web of life: we cannot satisfy our own desire for resources without considering the consequences of what we are doing for the rest of our ecosystem. We need to see a green economy as embedded within environmental systems and responding to them rather than seeking to dominate the natural world. Most importantly, our planet is a limited system and we must make the recognition of its limits the guiding principle of the creation of a green economy.

GH9. This means that economic growth is only possible in the short term as part of a transition strategy to move us towards an economy that is in a steady state. The infrastructure of our current economy reflects the era of cheap fossil fuel energy: replacing this infrastructure with one that enables self-reliant economies will be the major source of growth over the period up to 2050. Beyond that date we should aim to stabilize the economy within our national resource limits.

GH10. From the perspective of a green economist, the formal economy is embedded within a system of social and environmental structures: formal economic activity is only one aspect of economic activity. This
contrasts sharply with the prevailing view of the predominance of markets as the ideal mechanism for the
distribution of goods and resources. This is an extreme idealisation of the market economy and does not in
fact represent how the market functions in western societies, where laws governing such matters as minimum
wages and environmental health make it clear that the economy system is embedded in social systems.

**Specific Responses**

The economic, social and environmental outcomes that a green economy should aim to deliver, and the
appropriate tools and indicators to monitor progress towards such outcomes

GH11. We would suggest that the health of our ecosystem and of other species is a key outcome, which is
inextricably linked to the well-being of global citizens. These should be the key outcomes that a green economy
should seek to achieve. Appropriate indicators to measure this are already available and include: the efficiency
of the planet’s carbon and nitrogen cycles; the health and diversity of animal and plant life.

GH12. We would also propose that equality between people is a key outcome of a green economy, both
within and between nations. We would particularly encourage the Committee to take into account measures
which ensure the well-being of future generations.

GH13. Specifically, GDP is an inappropriate measure of a green economy, since it is focused on activity,
whether positive or negative in terms of well-being; because it measures flows rather than stocks; because it
takes no account of equity; and because its unit of measurement is in incidental monetary terms. Government
should have regard in particular to measures of material flows through the economy, minimizing the throughput
of non-renewable resources and substituting renewable for non-renewable resources wherever possible.

The nature of any barriers preventing the transition to a green economy

GH14. The principal barrier to the transition is insistence on using the market as the best guide to making
decisions about how much and what to produce and do. The government should be prepared to plan levels of
crucial outputs, like renewable electricity, road usage, agricultural production and pollutants.

GH15. The traditional focus on the labour market as the source of livelihoods and satisfaction is also a
barrier, particularly the need to maintain full-time full employment policy. A policy of making assets,
particularly land, more widely available would enable the shift towards self-provisioning and provisioning
within families and communities. This could be matched by a phased decline in the length of the working week.

GH16. Both “Green Economy Roadmap” and the title of the energy report “Keeping the Lights On”
demonstrate the way that the debate remains trapped within the existing, self-defeating model of how economic
life should be organized and debated. This is a major barrier to a transition towards a green economy and as
we embark on the transition we should all be encouraged to question hegemonic thought patterns.

The approach required to deliver a green economy, and the aspects of the current economic model that
require development, eliminating and/or new approaches found. What tensions might there be between
economic growth and the green economy? Would “greening” the economy deliver the outcomes needed?

GH17. A green economy cannot have the achievement of growth as its central guiding principle. Excessive
growth creates feedback systems that undermine the quality of life that we were seeking to enhance and is
hence self-defeating. There may be some scope for growth that does not rely on increased use of energy or
raw materials and transport, and has a neutral impact on waste production and pollution, and in building the
infrastructure we need for a sustainable society, but even during the transition to a green economy we need to
limit energy and materials use.

GH18. The design principle for a green economy should be circular rather than linear. Renewable resources
should not be used at a faster rate than they can be replaced, while non-renewable resources should be recycled.
Much progress has already been made in increasing energy efficiency and moving towards zero waste. These
principles should be supported by increasingly stringent tax incentives.

GH19. The economist Kenneth Boulding used the phrase “we cannot turn pots back into clay” to explain
how, once we have combined raw materials (eg clay) with highly-ordered energy sources (such as the wood,
coal or electricity used to fire the kiln) to create a sophisticated product, we cannot simply reverse the process
to recover natural resources that can be used as an input to a new production process. Any such recycling
process will require (at the very least) the use of more highly-ordered energy, can only be partially efficient,
and thus will in turn create more waste. From this we conclude that it is necessary to reduce our consumption
rather than just recycling non-renewable resources.

GH20. Because of the unfeasible nature of the increased efficiencies required (as demonstrated by the SDC’s
Prosperity without Growth report) and the nature of rebound effects associated with technological
improvements, we believe that the reliance on technological solutions, especially seeking to decouple economic
growth and production from CO2 emissions, is an example of psychological denial. Structural change in the
nature of our economic model, and major shifts in consumption patterns and the way we define “a good life”
are fundamental requirements of a green economy.
GH21. We urgently need government to bring about the immediate cessation of activities that will plainly not be part of the green economy, like building new coal power stations, development of coal mines, major new road projects or runways, and the use of artificial fertilizers. Simultaneously we need governments to strongly encourage the development of key green economy sectors, especially renewable energy infrastructure. While the Feed-in Tariff demonstrates what can be achieved by suitable market-based incentives, the impending energy crisis indicates also the need for direct public investment in and planning of the infrastructure that a green economy will need.

The policy and institutional “framework” required to create the right conditions for the green economy to thrive, and whether the Government’s forthcoming Green Economy Roadmap provides this framework. Does the Roadmap deliver a clear vision of the green economy?

GH22. We have not had time to study the Roadmap in detail but find its approach internally inconsistent. For reasons detailed elsewhere in this document, we believe that a green economy is incompatible with growth and needs to be developed outside the prevailing market model of economic organisation that dominates the Roadmap.

GH23. We would also question the usefulness of an approach to policy based on clear targets and a fixed direction of travel. The transition to a green economy will be a period of rapid innovation and change, some of which will be unpredictable. We would suggest that an experimental approach to policy-making is essential in such a situation and would propose piloting policies in specific areas rather than establishing dogmatic frameworks.

GH24. We question an approach to building the green economy based primarily on providing financial incentives to business. In terms of policy, we would suggest that the reliance on the market has demonstrably failed to protect our environment. We would suggest that rather than providing financial incentives or relying on goodwill, the government should take a stronger role in controlling corporations whose activities are destructive to the environment, including removing their licences to trade. Subsidiarity is important here: while some policies can only be effective at the global level (strict limits on CO2 emissions, for example), the principle of NIMBYism can be used to defend local environments against economic expansion if power is genuinely devolved to local people and their democratically elected representatives.

GH25. Given what we have argued earlier about the need to end economic growth, it follows automatically that issues of equity will become of greater importance: if the pie cannot grow larger then it is more important to ensure that everybody has a fair share. Hence a green economy must have a much greater policy emphasis on equality, including higher levels of redistribution, broadening of asset ownership, and policies to reduce wage differentials.

GH26. An institutional framework for businesses in the green economy would need to involve this greater focus on sharing the value of production between producer and consumer, as is typical in mutual organisations and co-operatives. We believe that such alternative economic organisations, which are not driven entirely by profit-seeking behaviour, will be more compatible with a steady-state economy and will put less pressure on resources.

GH27. More specifically, we would propose the introduction of a number of Ecological Enterprise Zones, in areas where the resources necessary for a sustainable economy to succeed are present, but which have not thrived in the competition for financial investment. These EEZs would be supported by government grants to become hot-houses for the innovation of green technologies and sustainable lifestyles. In return, they would be expected to achieve significant cuts in carbon emissions, resource usage, and levels of waste production. Government should enable local authorities in such areas to experiment with policy tools, such as carbon taxation and import and export duties. The aim would be for the EEZ to become a prototype of the self-reliant local economy that a green economy requires.

GH28. A system of Land Value Taxation could be used to achieve the redistributive aims identified in GH25 as well as ensuring that the value of planning gain stays with the community rather than individual developers. It could also be used in conjunction with local planning systems to provide incentives for appropriate green development and sustainable land use.

Priorities for action, including those sectors of the economy crucial for creating the conditions for a green economy

GH29. The hallmark of a green economy is self-reliance: this can sometimes mean greater government involvement in key sectors than a total commitment to free markets would suggest. Sectors of particular interest are those for food and energy. We would propose that plans for national resilience in the areas of food and energy are developed as a matter of urgency: reliance on lengthy supply chains may leave us vulnerable in a world where increasingly unstable political and climatic systems may threaten their viability.

GH30. We welcome the introduction of the Feed-in Tariff, which clearly indicates how government commitment and a suitable framework of incentives can call forth a rapid and appropriate response from both businesses and citizens. More creative means need to be found to enable those without money to invest, to
benefit from the feed-in tariff, perhaps by encouraging local authorities to create bonds to fund the hire-purchase of solar panels by less well-off residents.

GH31. The next focus of attention should be agriculture, with a shift in emphasis towards domestic food sufficiency. Each local authority should be required to draw up a Food Action Plan whose central aim would be to maximise the provision of staple foods for local residents. A reinhabitation of the countryside could create sustainable livelihoods for many, who would also acquire the right to build homes in the countryside if they were gaining their livelihood from the land.

GH32. Considerable attention needs to be paid to the use of land in a way which provides the maximum opportunity to sequester carbon dioxide. Agricultural systems should be redesigned to enable them to be less carbon intensive. National planning is urgently needed to balance the potential competing uses of land between the growing of food, the production of biofuel crops, the production of biochar, and the preservation of wilderness areas.

GH33. The construction industry is a major source of carbon emissions and a significant user of new resources. While progress has been made in terms of the energy efficiency of new buildings, construction needs to be seen as a sector which can offer huge potential for sequestration. More emphasis needs to be put on the refurbishment of existing stock, rather than the building of new houses to higher standards of energy efficiency. Regulations should require the use of materials that are carbon neutral, especially wood but also magnesium plasters and renders, to replace the widespread use of steel and concrete which are highly carbon intensive.

GH34. A green economy will mean lower levels of production and also of consumption. Much of the current demand for products is driven by the advertising industry. To enable the transition to a green economy OFCOM should be given a new role in limiting the use of advertising to create desire for goods and services.

The role of consumers, businesses, non-government organisations, and international bodies in delivering, and stimulating demand for, a green economy

GH35. As already identified, we see a major role for national government in creating the framework within which a green economy can flourish. This should include the setting of suitable tax incentives and the control of industries which are threatening to exacerbate the ecological crisis. We cannot expect businesses to operate more sustainably without this sort of strong policy framework.

GH36. There is also an important role for local government in fostering sustainable local economies. We would suggest that local authorities switch their priority away from regeneration and towards community resilience. An important aspect of such a switch would be the tactical use of procurement, focusing on local sustainable businesses.

GH37. We are sceptical about the power of the “green consumer” and would suggest that the language is changed to reflect what is really needed from citizens if we are to make a successful transition to a green economy, ie that they will live more lightly and for the common good.

GH38. We would propose a different approach based on encouraging citizens to become genuinely committed to acting as Ecological Citizens. Government has a role here, particularly in terms of education and setting an example, but policies like nudge that seek to manipulate citizens can be counter-productive. An approach which facilitates a political debate about how we might share in the creation of a better society, as well as a greener economy, would be more fruitful in the long run.

Whether any models that more closely resemble a green economy exist elsewhere that the UK should aspire to

GH39. The sorts of sustainable approaches to economic life that we consider representative of a “green economy” have largely been undermined during the process of industrialisation and urbanisation. In developing our ideas about the green economy we have been deeply influenced by the approach to economic and social life of indigenous people around the world, especially by their close and respectful relationship with the land.

GH40. The Gandhian approach to economic development, based around self-reliant and close-knit villages, has also provided inspiration, and still offers sustainable livelihoods for many in India, although it is being undermined as India competes in the global economy. This philosophy has influenced the recent economic development strategy of Thailand, which has as its stated objective the approach of a sufficiency economy to achieve human development, “emphasizing moderation, responsible consumption, and resilience to external shocks”. The Committee might explore how this model has worked out in practice.

GH41. In terms of our emphasis on a strong role for government in influencing the future development of economic policy we would identify the actions of the government of Brazil in recent years. The government’s ownership and political influence over its largest national bank enables it to effectively direct investment so that it serves the benefit of the community at large rather than merely the investors.

GH42. In terms of housing policy we would suggest that the Committee studies the Scandinavian co-housing model. This enables the development of high-density, low-energy dwellings which also foster a strong community spirit.

GH43. As discussed previously, a green economy will require higher levels of domestic and personal food production. To ensure this, government needs to consider both land taxation and land reform. Both have been undertaken in a range of countries in recent years, although the Bolivian land reform is perhaps the most prominent recent example.

GH44. Closer to home, we have found inspiration in the policy of the devolved government in Wales. A green economy is likely to focus more on livelihoods than simply on the labour-market, and opportunities should be made available for citizens to meet their own needs, especially by opening up access to land. Welsh planning policy is beginning to support the development of sustainable livelihoods as evidenced by planning advice note TAN6 from the Wales Assembly Government. It includes a section called “One Planet Developments”, which allows exemption from restrictions on planning limitations in the countryside for those who “over a reasonable length of time (no more than five years), provide for the minimum needs of the inhabitants” in terms of income, food, energy and waste assimilation.

How the UK’s policies to deliver a green economy relate to actions needed to deliver the global green economy (a theme of the June 2012 Rio Summit)

GH45. The value of this inquiry is in combining questions about the future economic development of the UK with questions about its approach to tackling climate change. We find that the present government’s strategy of export-led growth as a response to recession is incompatible with a green economy: it relies on lengthy supply chains and hence an extensive use of energy and so contributes to climate change.

GH46. The basic question for the development of a global green economy concerns the level of consumption that is possible within the limits imposed by the carbon cycle, if we are to assume comparable standards of living across the world. We base our view of the global green economy on the Contraction and Convergence model of the Global Commons Institute. This begins with the global limit for CO2 emissions and divides this equally between all the world’s citizens. This gives an idea of the energy consumption that is possible for each person, and in the context of the UK suggests a reduction in energy use of around 90%, hence necessarily a significant contraction in the size of the economy. Other countries which are presently below their limits will still be able to experience economic growth, particularly the countries of sub-Saharan Africa which are many times below their CO2 limit.

GH47. This view of a lower-energy world implies the end of wasteful trade which is based on exchange for profit rather than improving quality of life. In the context of energy limits, the theory of comparative advantage needs to be heavily modified. In its place we would suggest that local self-reliance becomes the first principle of production, both in the UK and overseas. We would also propose the establishment of a General Agreement on Sustainable Trade to replace the World Trade Organisation. The central objective of the GAST would be the achievement of sufficiency on a global basis, based around a system of self-reliant local economies, and supported by import and export levies.

GH48. Given the UK’s historic role as the country which led the way into the age of globalisation, and the role it has played more recently in negotiating free-trade agreements, we would argue that this leaves us with a particular responsibility to support the poorer countries of the world on their path to national self-reliance. Establishing special trade status for poorer nations during their journey to self-reliance, as well as sharing technological knowledge with them freely, would both be contributions we could make to repay our historic debts.

15 August 2011

Written evidence submitted by WWF-UK

1. Summary

1.1 Definition, outcomes and indicators: a green economy should deliver three main outcomes: ensuring mankind’s ecological footprint is sustainable; maintaining and enhancing natural capital, biodiversity and ecosystem services; and improving human wellbeing and social equity. We urge the international community to adopt a credible set of indicators to measure progress towards each outcome at both national and global levels.

1.2 Green economy and economic growth: economic stability and growth is fundamentally dependent on the availability of natural resources and ecosystem services. If economic activity undermines natural capital, and depletes natural resources at unsustainable rates, growth may increase over the short term, but medium and long-term growth prospects will be jeopardised.

1.3 Current patterns of growth are unsustainable but that does not mean growth and environmental sustainability are necessarily incompatible. It is theoretically possible to “dematerialise” economic growth such
that GDP continues to rise while much greater levels of resource efficiency and productivity enable overall resource use and environmental impact to decline in absolute terms—so-called “absolute decoupling”. In practice this will require major economic, technological and social changes that together constitute a huge political challenge.

1.4 Barriers to the transition to a green economy include: environmental costs are often not reflected in prices and decision making; short-term decision making in business and government; pursuit of narrow national self-interest precludes global co-operation and agreements; misdirected public spending; inadequate policy making tools; and a lack of political will stemming from lack of sufficient popular support for policies that are perceived to harm immediate material concerns.

1.5 Solutions for the transition include: a shift in the tax system towards resources and pollution and away from employment, with corresponding measures to protect low-income groups; new incentives for investment in natural capital, such as equitable payments for ecosystem services; financial market and corporate governance reforms to promote sustainable investment and longer-term thinking in business; promoting alternative ownership models such as social enterprises, mutuals and co-operatives; improved accounting for environmental and social costs and benefits in policy appraisal; greener public spending and procurement; and promoting a cultural shift towards sustainable lifestyles.

1.6 UK Government approach to green economy: we welcome the publication of Enabling the transition to a green economy (the “green economy roadmap”), which is a useful communications tool for business. However we were disappointed that this did not include significant new policy commitments and we remain concerned that core economic policy, such as the Plan for Growth, is insufficiently green. We are also concerned that the Government’s institutional framework for sustainable development has been weakened and that this will hinder the transition to a green economy.

1.7 WWF recommends the UK Government:

- streamlines green economy policy by putting an ambitious green growth strategy at the centre of government plans to foster a sustainable economic recovery, eg in the second phase of the Growth Review;
- prioritises government action for those sectors of the economy that can support both growth and sustainability of the UK economy, eg renewable energy and energy efficiency sectors;
- adopts a credible set of green economy indicators and targets to guide policy making, as part of a much more transparent and coherent national framework for assessing government performance;
- commits to reducing the impact of UK consumption on overseas ecosystems, adopting a strategic approach to this;
- makes a significant shift to a greater proportion of green taxation (eg from the current 8% to 10% by 2015, and 14% by 2020), with measures to protect low income groups; and
- provides leadership within the EU, G20 and Rio 2012 processes to promote ambitious multilateral targets and commitments for the transition to a global green economy.

2. Green Economy Definition, Outcomes and Indicators

2.1 Definition of green economy: for WWF, a green economy is an economy which ensures people and nature thrive; it would improve the condition of the natural world, and ensure wellbeing for all people. A number of definitions have been proposed, none of which is universally accepted. UNEP’s view is that a green economy delivers “improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”. This is useful, although we would like to see the need to enhance natural capital and biodiversity more explicit.

2.2 WWF is a member of the Green Economy Coalition (GEC), a group of over twenty international civil society organisations promoting action at global and national levels, under the overarching vision of “prosperity for all within one planet limits”. According to the GEC, “a green economy is not just one that invests in the sustainable management of key resources and natural capital, rather, it is one that invests in the natural world in order to build an economy that explicitly pursues wellbeing for all”. At WWF, our vision of a “One Planet Economy” is one which ensures people and nature thrive within the resources and ecological boundaries of our one planet.

2.3 Importantly, these conceptions of a green economy include a human wellbeing and social equity dimension. Other interpretations of the concept, notably those of the UK Government, OECD and European Commission, focus on the environmental dimension, while asserting that a green economy needs to be consistent with separate social goals. We believe this fails to acknowledge the essential dependence of human

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5 Green Economy Coalition August 2011 newsletter.
2.4 We reject interpretations of the term “green economy” limited to those industries involved directly in the provision of environmental goods and services, and agree with the UK Government that “a green economy is not a sub-set of the economy at large—our whole economy needs to be green”.  

2.5 Indicators: There is as yet no definitive, agreed set of indicators for a green economy or sustainable development. We encourage the international community to agree on such a framework through existing policy processes (eg Rio 2012, G20, World Bank Wealth Accounting and Valuation of Ecosystem Services initiative and UN system of standard national accounts). These processes should be inclusive, engaging a wide range of stakeholders and experts. Although international agreement on this would be a huge step forward, if it is not forthcoming, this should not delay the adoption of credible frameworks at regional (eg EU) and national levels.

2.6 Possible indicators to measure progress towards each of the three outcomes are set out below. Some indicators apply to more than one outcome. We also suggest that it is meaningless to have indicators without targets: even if trends are going in the right direction, the rate and scale of change will determine whether or not key ecological thresholds and tipping points are reached. Indicators and targets must also guide core economic policy making from the outset rather than simply assess retrospectively the cumulative impact of policies.

<table>
<thead>
<tr>
<th>Ensuring mankind’s footprint is sustainable:</th>
<th>Maintaining and enhancing natural capital and ecosystem services:</th>
<th>Improving human wellbeing and social equity:</th>
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<tr>
<td>Global and national level:</td>
<td>Global oversight of nine planetary boundaries:</td>
<td>Global level:</td>
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<tr>
<td>— Greenhouse gas emissions (production and consumption)</td>
<td>— Climate change</td>
<td>— Millennium Development Goals</td>
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<td>— Ecological footprint/ Material flows (biomass, abiotic resources etc) Tool: REAP and EUREAPA</td>
<td>— Biodiversity</td>
<td>— Income distribution (eg Gini coefficient)</td>
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<td>— Water footprint</td>
<td>— Ocean acidification</td>
<td>National level:</td>
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<td>— Land use change</td>
<td>— Water footprint</td>
<td>— Median income</td>
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<td>— Nitrogen/Phosphorous</td>
<td>— Land use change</td>
<td>— Income distribution (Gini coefficient)</td>
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<td>— Chemical dispersion</td>
<td>— Global and national level indicators:</td>
<td>— Human Development Index</td>
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<td>— Aerosol loading</td>
<td>— Stocks of natural capital</td>
<td>— Index of Sustainable Economic Welfare</td>
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<td>— Ozone layer</td>
<td>— Flows of ecosystem services</td>
<td>— Unemployment rate</td>
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<td>— Global and national level indicators:</td>
<td>— Monetary value of changes in natural capital</td>
<td>— Under-Five Mortality Rate</td>
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<td>— Stocks of natural capital</td>
<td>— Deforestation rate</td>
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<td>— Flows of ecosystem services</td>
<td>— WWF’s Living Planet Index of species populations</td>
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2.7 We welcome the UK Government response to the 2009 report of the Commission on the Measurement of Economic Performance and Social Progress, which was commissioned by President Sarkozy and led by Joseph Stiglitz, A. Sen and J-P. Fitoussi. The UK Government has committed to measuring national wellbeing, and including natural capital in the national environmental accounts. The Prime Minister has also made welcome statements about the insufficiency of GDP as a measure of progress. We recommend these initiatives are pulled together into a transparent, coherent framework for measuring progress and assessing overall government performance, towards the overarching goal of sustainable development.

3. GREEN ECONOMY AND ECONOMIC GROWTH

3.1 Economic stability and growth is fundamentally dependent on the availability of natural resources and ecosystem services. If economic activity undermines natural capital, and depletes natural resources at unsustainable rates, growth may increase over the short term, but medium and long-term growth prospects will be jeopardised. Environmental degradation imposes significant economic costs—for example, extreme weather events, crop failures, soil degradation, water over-abstraction and pollution, all have severe economic and social consequences. Evidence that the transition to a green economy will reduce costs and boost growth in the long term is provided by the Stern Review on the economics of climate change, the Economics of Ecosystems and Biodiversity (TEEB) initiative and UNEP’s Green Economy report.

6 For example the G77 have been resistant to the term green economy because the social equity dimension is not explicit.
7 HM Government, 2010, Enabling the transition to a green economy.
8 A team of researchers led by Johan Rockström at the Stockholm Resilience Centre have attempted to quantify the safe biophysical boundaries outside which the Earth System cannot function in a stable state—the state in which human civilizations have thrived. Read their 2009 academic paper here.
9 REAP: Resources and Energy Analysis Programme—http://resource-accounting.org.uk/
3.2 However, the transition to a green economy is capital-intensive, with high up-front costs for renewable energy systems, smart grids, energy efficiency, protecting forests etc, paying dividends over the medium and long term. This presents a fundamental challenge for both markets and governments, which operate in a context where performance is measured over shorter timeframes. A shift to longer-term decision making will be required to ensure the political and economic viability of sustainable solutions.

3.3 WWF-UK acknowledges the validity of the debate on whether economic growth (in terms of increasing GDP) is ultimately compatible with environmental sustainability. It is clear from the evidence of climate change and biodiversity loss that current patterns of growth are unsustainable. However, it is theoretically possible to "dematerialise" economic growth such that GDP continues to rise in financial terms while much greater levels of efficiency and resource productivity, together with shifts in consumption patterns, enable overall resource use and environmental impact to decline in absolute terms—so-called “absolute decoupling”. In practice this will require major economic, technological and social changes that together constitute a huge political challenge.

3.4 There is scant evidence that absolute decoupling has happened in the past. One example often cited is the decrease in greenhouse gas emissions since 1990 in some advanced economies including the UK during a period of significant economic growth. However, this only takes into account production or territorial emissions, and not the impact of consumption. In the UK, because of a growing consumption of goods produced overseas, the carbon footprint of our lifestyles grew by 18% between 1990 and 2004.10

3.5 Lack of past evidence does not necessarily mean absolute decoupling will be impossible to achieve in the future. WWF’s 2011 international Energy Report11 showed that under current assumptions from the UN and other organisations with respect to population and GDP growth, worldwide demand for energy could reduce in absolute terms by 15% by 2050 compared to 2005 levels.

4. Green Economy Barriers and Solutions

4.1 Economic incentives currently point in the wrong direction for individuals, business and governments: sustainable choices are often the hardest to make. At the heart of this is short-term thinking—a human trait that is reflected in our institutions. Yet we also have a capacity for long-term thinking, for example by investing in scientific understanding of future risks such as climate change.

4.2 Government’s role is not to orchestrate the transition to a green economy from the top down. It should rather seek to create enabling conditions to foster bottom-up technological and social innovation oriented towards sustainable development. In the short term this will entail specific government interventions to support nascent renewable energy industries until they are sufficiently mature.

4.3 In the table below we set out some key barriers to the transition to a green economy, and corresponding solutions to overcome these.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Solutions</th>
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<tr>
<td>Negative environmental and social externalities: the value of the natural environment is not fully reflected in markets, prices and decision making. Polluters and consumers often avoid paying the social costs of environmental degradation. Powerful interests vested in the &quot;brown economy&quot; resist change.</td>
<td>— Internalise externalities through a shift to greater proportion of green taxes on resources and pollution, reducing tax on &quot;goods&quot; such as employment. — Establish equitable payments for ecosystem services to incentivise investment in natural systems. — Include social and environmental externalities in corporate reporting. — New guidelines and rules on lobbying. — Financial market reform to promote environmental as well as financial sustainability. Incentivise longer term shareholdings. Financial Transaction Tax to reduce speculative activity and generate funds to invest in minimising environmental and social risks, eg climate adaptation. — Green investment banks— hybrid state-owned banks that leverage private investment for green infrastructure. — Reform IMF and World Bank to ensure investment decisions are subject to stronger sustainability criteria. — Incentivise and support alternative ownership models such as social enterprises, mutuals and co-operatives that build long term social and environmental value. — Legislate for the protection of interests of future generations; promote wider understanding of the effect of current activities on future generations.</td>
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<tr>
<td>Short-term decision making. Business performance is measured on monthly, quarterly, annual profits; government time horizon is 4-5 years between elections, and quarterly GDP figures are the primary indicator of performance. Short termism in financial markets leads to misallocation of capital. Political and financial returns for green investments accumulate over the medium to long term.</td>
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10 Data from Stockholm Environment Institute in Defra Sustainable Development Indicators 2009.
11 www.panda.org/energyreport
Environmental Audit Committee: Evidence

5. UK Government Approach to Green Economy

Green economy roadmap and core economic policy

5.1 On 5 August 2011 the Government published Enabling the transition to a green economy, a suite of documents formerly referred to as the “green economy roadmap”. These documents were produced in response to requests from business for greater clarity and certainty on different aspects of environmental policy including energy and climate, environmental regulation, resource efficiency and waste.

5.2 WWF-UK welcomes this publication as a useful communications tool for business. However, we were disappointed that the document did not set out the new, comprehensive and strategic approach to green economy policy that is required to address the scale and urgency of the challenge. No significant new policies were

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WWF-UK has led a consortium of European partners in an EU-funded programme to develop a new tool to promote better monitoring of ecological, carbon and water footprint impacts of policies at EU and national level, see http://www.oneplaneteconomynetwork.org/
announced and it is not clear whether this initiative will lead to better co-ordination of these policy areas on an ongoing basis.

5.3 Furthermore, although credit is due for effective collaboration between Defra, BIS and DECC, the most important department in terms of economic policy—the Treasury—was absent from the core project team. This gives the impression that green economy policy continues to be seen as an “add-on” to core economic concerns. Further evidence for this can be found in the Plan for Growth, published with the Budget in April 2011, in which out of sixteen measures of success, only one (weak) environmental measure was included (“increased investment in low carbon technologies”). We recommend that in the second phase of the Growth Review, the Treasury and BIS, together with Defra and DECC, put an ambitious green growth strategy at the centre of their plans to foster a sustainable economic recovery.

The Energy sector as a key green growth sector for the UK

5.4 As part of its Growth Review, the Government should investigate the key sectors of the economy that could contribute to both UK economic recovery and increased environmental sustainability. WWF strongly supports the growth of the renewable energy and energy efficiency sectors as a key priority of UK energy and economic policy, given the role that these sectors could play in sustainably decarbonising UK power generation (the production of electricity currently accounts for approximately 39% of total UK CO2 emissions) whilst supporting substantial job creation in areas where the UK already has strong research and industrial skills.

5.5 There is strong evidence to show that the renewables industry could generate substantial employment and economic benefits if the UK takes up the opportunity of early action in the sector. Several reports have highlighted that the UK has the potential to be a market leader in offshore wind, wave and tidal technologies, servicing the huge domestic market and exporting to the burgeoning European markets and beyond.

Significant growth in green jobs is a key potential economic benefit of building a strong UK supply chain, a phenomenon that has already been witnessed in Germany where over 367,000 people are currently employed in its renewables industry. In addition, substantial numbers of jobs could be created in the energy efficiency sector, should the right policy signals be put in place. For example, Chris Huhne announced at the start of the latest Energy Bill that up to 250,000 jobs could be created in the UK’s insulation sector by 2030.

Green tax shift

5.6 We welcome the Government’s commitment to increase the proportion of environmental taxation but query the scale of ambition. Currently, environmental taxation is around 8% of the overall tax take. We would like to see this move to around 10% by 2015, and 14% by 2020, in line with recommendations of the Green Fiscal Commission. This should be implemented with corresponding measures to avoid regressive effects on low-income groups.

Addressing the impacts of UK consumption on ecosystems and biodiversity overseas

5.7 According to the Government’s National Ecosystem Assessment, over one third of the biomass (food, fibre, timber, biofuels etc) used in the UK is imported from overseas. Although our territorial emissions are decreasing, if we take into account the carbon embedded in imports the UK’s carbon footprint increased by 18% between 1990 and 2004. Current government targets focus on territorial emissions, and reducing impact on England’s biodiversity. These are important and should remain, but should be complemented by a commitment to reduce the global impact of UK consumption on climate change, and biodiversity loss in other countries.

Institutional framework for green economy and sustainable development

5.8 Overall we are concerned the Government’s institutional framework for sustainable development has been substantially weakened over the last year. The Green Economy Council is an important business advisory body, but for it to play a significant role in shaping policy or assessing performance there would need to be broader representation from civil society and academia to establish greater legitimacy.

5.9 We welcome the setting up of a Natural Capital Committee, announced in the June 2011 Natural Environment White Paper. However, it is not yet clear what the role and powers of this committee will be, and whether it will have a demonstrable effect on planning and economic policy making. While it is crucial to monitor changes to England’s natural capital, this mechanism will not address the impacts of the UK economy on ecosystems in other countries, which we also have a responsibility to minimise.

17 RenewableUK 2011 UK Offshore Wind: Building an Industry p34.
18 See Green Fiscal Commission Final Report; the Liberal Democrats had a commitment to increase the proportion of environmental taxation to 10% by 2015 in their manifesto, but this was not included in the Coalition Agreement.
5.10 In Wales, First Minister Carwyn Jones, when introducing the new legislative programme to the National Assembly on 12 July 2011 said:

“We will legislate to embed sustainable development as the central organising principle in all of our actions across Government and all public bodies, by bringing forward a sustainable development Bill. The approach will set Wales apart as a sustainable nation, leading from the front”.19

We would welcome this kind of high-level political commitment and action at the UK level.

26 August 2011

Written evidence submitted by Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science

Alex Bowen is principal research fellow at the Grantham Research Institute on Climate Change and the Environment at London School of Economics and Political Science.20 Simon Dietz is co-director of the Grantham Research Institute on Climate Change and. Dimitri Zenghelis is Visiting Senior Research Fellow at the Grantham Research Institute and also Senior Economist at Cisco.

This submission addresses the following issues identified by the committee:

“The Committee will examine the concept of a green economy in the UK, what it should look like, and how it will help deliver sustainable development. The Committee also wishes to examine the barriers preventing the transition to a green economy and the Government’s role in tackling these and creating the conditions necessary for a green economy to thrive”.

In particular the following questions have been addressed:

1. What are the economic, social and environmental outcomes that a green economy should aim to deliver?
2. What are the appropriate tools and indicators to monitor progress towards such outcomes?
3. What is the nature of the barriers preventing the transition to a green economy?
4. What approach is required to deliver a green economy, and what aspects of the current economic model require development, eliminating and/or new approaches to be found? What tensions might there be between economic growth and the green economy? Would “greening” the economy deliver the outcomes needed?
5. What policy and institutional “framework” is required to create the right conditions for the green economy to thrive, and does the Government’s Green Economy Roadmap provide this framework? Does the Roadmap deliver a clear vision of the green economy?
6. Do any models that more closely resemble a green economy exist elsewhere that the UK should aspire to?
7. What is the role of consumers, businesses, non-government organisations, and international bodies in delivering, and stimulating demand for, a green economy?
8. Do any models that more closely resemble a green economy exist elsewhere that the UK should aspire to?
9. How do the UK’s policies to deliver a green economy relate to actions needed to deliver a global green economy (a theme of the June 2012 Rio Summit)?

The arguments set out in the paper are those of the authors and not necessarily of the Grantham research Institute for Climate Change and the Environment. In preparing this submission we have drawn particularly on work carried out by the Institute though other authors are referenced.

Submission Summary

— Current economic activity is causing unsustainable environmental damage due to multiple market and policy failures. A green economy should take proper account of the factors which lead to these market and policy failures, to deliver not only better environmental outcomes, but better social and economic outcomes also.
— Measuring progress toward the economic, social and environmental outcomes that a green economy could deliver requires a range of supplementary indicators in addition to GDP.
— Multiple barriers prevent the transition to a green economy: an inconsistent approach to carbon pricing, patenting difficulties for entrepreneurs, technological uncertainty and resulting uncertain returns for lenders and investors etc. Overcoming barriers needs careful analysis. Successful action requires transparency and credible commitments from policy-makers.

19 First Minister Carwyn Jones’ statement to the National Assembly on 12 July 2011.
20 The work of the Grantham Research Institute is integrated with the activities of the Centre for Climate Change Economics and Policy (CCCEP), hosted by LSE and the University of Leeds. CCCEP is funded by the UK Economic & Social Research Council and Munich Re.
— In order to ensure the full benefits of the transition to a green economy are realised, we need to enhance understanding of long-term economic growth and the scope to kick-start a new Industrial Revolution centered around a clean-energy economy and renewable resources.

— A "long, loud and legal" framework is needed for policy. The government should also shoulder some of the policy and regulatory risk by entering into pre-commitments entailing financial or reputational penalties for backsliding.

— It would be worth considering whether the Committee for Climate Change should be given more power to set policy instruments, such as the new carbon price floor, tariffs, and carbon-related changes such as the Climate Change Levy and CRC EES payments.

— Building-up international collective action to bring down GHG emissions is a priority. A cross-the-board carbon pricing should be a part of that action. The second imperative is to stimulate green innovation. Carbon pricing is part of this, but there is a need for policy action particularly in the energy, transport and construction sectors.

— Better public understanding of environmental dangers and risks, and a resulting values shift in civil society, is likely to drive the transition to a green economy.

— The U.K. should continue to work closely with EU partners to ensure a level playing field for green investment, without discriminating between countries, firms or regions.

1. What are the economic, social and environmental outcomes that a green economy should aim to deliver?

1.1 The answer to this question depends on people's values and the interpretation of the term "green economy". The simple response that we offer here is that a green economy, compared with the current U.K. economy, should deliver better environmental outcomes and thereby offer scope for better economic and social outcomes too. The opportunities are enormous but taking advantage of them will require collective action sustained across borders over the long term as well as changes in U.K. government policies. Better environmental outcomes would include lower and declining greenhouse gas emissions, less damage to environmental assets from which people derive wellbeing directly, such as air quality, and less erosion of so-called "natural capital"—finite natural assets in their role of providing natural resource inputs and environmental services for economic production (OEC? glossary, http://stats.oecd.org/glossary/detail.asp?id=1730). Achieving better environmental outcomes would also allow more sustainable economic development over the long term and attain greater fairness between generations. This is particularly evident with respect to stopping climate change (Stern, 2009). Moreover, without policy intervention these environmental stresses are likely to mount with time as a growing global population and rising per-capita consumption put increased pressure on resources.

1.2 The argument that we can obtain better outcomes across all three domains—environmental, social and economic—is based on the observation that the existing economy suffers from many market and policy failures. These afflict environmental outcomes particularly badly because many economic activities damage the environment and use up finite resources without those responsible for the activities concerned taking this into account. If policy-makers, households, firms and other decision-making parts of civil society start to take proper account of factors leading to the market and policy failures, correcting these failures where they can, individual and social wellbeing can be enhanced over time.

1.3 In several areas, particularly with respect to the incentive to innovate, it has been recognised for a long time that laissez faire market arrangements (relying primarily on individuals pursuing their own self-interest through the market) are powerful in stimulating productive economic activity, but are unlikely to lead to the best outcomes for society as a whole. The recent financial crisis showed us what can happen when mounting risks are ignored. There is wide recognition that on its own, the market failed to adequately police the market: it is unlikely to be best placed alone to safeguard the environment. Growing awareness of the risks to the environment and future growth has alerted many policy-makers that the costs are in fact much higher than had been realised. The good news is that this awareness could lead to careful policy interventions that have big pay-offs. The composition of economic growth could be improved. There is scope for current welfare to be raised, too, especially while there is unusually high unemployment and underused plant, equipment and infrastructure. But at the moment, the U.K. may need to invest more—primarily in the preservation of natural capital, including the atmosphere—rather than consume more in order that many benefits accumulate in the longer term.

1.4 This line of argument draws on conventional environmental economics and implies a rather modest view of what needs to change to make the U.K. economy more "green". It is consistent with the fairly broad definition of a green economy as one that supports sustainable development—"development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987). As far as climate change is concerned, big changes in what households consume will probably not be necessary to reduce greenhouse gas emissions sharply. There is a larger issue of what sustainability means in the long term and how to bring it about (Neumayer, 2003; Atkinson et al., 2007) but we focus here on the sorts of policy changes that could command broad support even at a time when people are worried about low growth.
2. What are the appropriate tools and indicators to monitor progress towards such outcomes?

2.1 Multiple indicators are needed, as recognised, for example, in the OECD’s work on indicators for the green economy, the World Bank’s estimates of natural resource depletion and adjusted savings, the UNDP’s Human Development Index and the UK government’s National Ecosystem Assessment. What is easiest to measure in the economy, society and environment may not be the most important. Social welfare cannot be reduced to a single dimension such as income or happiness. It requires a range of supplementary indicators in addition to GDP. Many of the issues have been laid out in recent reports, including President Sarkozy’s Commission on the Measurement of Economic Performance and Social Progress (http://www.stiglitz-sen-fitoussi.fr/en/index.htm ) and the international Economics of Ecosystems and Biodiversity Study (http://www.teebweb.org/home/tabid/924/Default.aspx ). There remains much to be done in refining valuation methods, extending the scope of environmental and social measures and acknowledging the uncertainty around measurement. This reflects not only difficulties in gathering data but also differences in ethical perspectives and attitudes towards risk.

2.2 As far as climate change is concerned, improved data on energy use, both domestically and in industry, is needed. Public support for investment in smart buildings, smart grids and other monitoring and management technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient. A UK carbon reduction certification agency would be a helpful innovation (Martin technologies can help provide data to assess the carbon intensity of activities, helping people to make their energy use more efficient.

3. The nature of any barriers preventing the transition to a green economy

3.1 The key barriers are the market and policy failures that have to be overcome (Stern, 2007; Helm, 2010).

3.2 In economists’ jargon, “externalities” abound. In the climate change domain, the damage done by greenhouse gas emissions is not taken into account unless policy-makers manage to impose a price, for example, through the EU ETS. Lots of waste products generate adverse spillovers, if not on the same scale as carbon dioxide. But there are also good spillovers, for example, when an entrepreneur comes up with a good idea that cannot be patented—and in those cases, the market incentive to engage in the activity is likely to be inadequate. Ecosystem services to consumers and companies are generally not priced. Private firms tend to undersupply infrastructure and networks. Access to information about the environmental consequences or monetary costs of actions is unevenly distributed. Technological and other uncertainties increase costs to risk-averse lenders.

3.3 Overcoming such barriers need not be expensive, but it does need careful analysis. Successful action requires transparency and credible commitments from policy-makers to guard against some well-known pitfalls such as short-termism, rent-seeking and regulatory capture.

3.4 In addition to the long-standing barriers to the transition to the green economy, there are also particular problems at the current conjuncture. Real incomes have been eroded, private investment and innovation have slowed, and short-term economic prospects are dampening demand in the economy. The echoes of the recent banking crisis are inhibiting financial intermediation and hence investment. The propagation of macroeconomic shocks often reflects coordination, asymmetric information and other market failures, amplified in the macroeconomic swings in collective confidence or what Keynes termed “animal spirits”. In such circumstances, governments can usefully act opportunistically by increasing investment in environmental capital and clean technologb10ies (Bowen and Stern, 2010).

4. What approach is required to deliver a green economy, and what aspects of the current economic model require development, eliminating and/or new approaches to be found? What tensions might there be between economic growth and the green economy? Would “greening” the economy deliver the outcomes needed?

4.1 First, governments need to apply long-standing insights from public and environmental economics, for example about the use of corrective taxes and subsidies. For the UK, bodies such as the OECD (http://www.oecd-ilibrary.org/economics/oecd-economic-surveys-united-kingdom-2011/climate-change-policy-in-the-united-kingdom_eco_surveys-gbr-2011-7-en ) and the Institute for Fiscal Studies (http://www.ifs.org.uk/mirrlees/mResearch/id/213) have made helpful suggestions. Second, the study of environmental economics needs to be encouraged, notably more empirical work evaluating specific policies, to understand what works in practice. Third, we need to enhance our understanding of long-term economic growth and the scope to kick-start a new Industrial Revolution centred around the clean-energy economy and renewable resources. The potential is great (Romani et al., 2011). In the presence of such pervasive market failures, and with policy outcomes likely to yield long run, non-marginal economic and environmental effects, any analysis must be broad enough to cover the full array of policy impacts. This means recognising the shortcomings and limitations of some of the existing economic analyses, based on over-simplified or narrow modelling, or on models that take a limited view of the nature of innovation.
and learning. Though such models are informative, their limitations need to be recognised explicitly in order that policymakers are not misled.

4.2 There will continue to be tensions between economic growth and the promotion of the green economy. There are, for example, real problems in trying to promote "environmentalism in one country", such as carbon leakage, pollution havens and at least transitory impacts on competitiveness in a few industry sectors. Countries’ transitions are likely to proceed jerkily and at different speeds. Conventional measures of economic growth may register a fall, at least for a while, because of transition costs and the need to rebalance activities to give greater emphasis to non-marketed components of wellbeing. But as with any investment, a small early sacrifice of consumption is designed to yield substantial gains down the road.

4.3 However, in some respects now is a very good time to accelerate the greening of the UK economy because of high involuntary unemployment and low utilisation of plant and equipment. There is also a global excess of likely full-employment saving over prospective conventional private-sector investment needs, a characteristic common to severe economic downturns (Zenghelis, 2011). Standard macroeconomic theory and evidence suggest that in the current economic environment, if policy-makers were able to open up viable new markets by tackling market failures, they could unleash sizeable macroeconomic benefits by boosting private spending, creating jobs, generating tax revenues, and allowing the monetary authorities greater leeway to stimulate demand. Moreover, at the present time this private investment need not crowd out alternative capital expenditure or swell public borrowing. There are also likely to be big opportunities to get firms to improve their energy efficiency without hitting their profits or employment (Martin and Wagner, 2009b).

5. What policy and institutional 'framework' is required to create the right conditions for the green economy to thrive, and does the Government’s Green Economy Roadmap provide this framework? Does the Roadmap deliver a clear vision of the green economy?

5.1 A “long, loud and legal” framework is needed for policy. To develop credibility over long time horizons, independent and trusted institutions need to be built up and clear and fair rules set out to guide policy revisions. To avoid time inconsistency, and to align the interests of policymakers with those of private investors, the government must be prepared to enter into pre-commitments entailing financial or reputational penalties for back-sliding—in other words, it must shoulder some of the policy and regulatory risk. To minimise rent-seeking and regulatory capture, policies need to be kept simple and transparent, without discriminating among private agents, and the incidence of costs and benefits carefully examined.

5.2 In the area of climate change, the Government could build on the promising example of the UK Committee on Climate Change, set up in 2008. It is held at arm’s length from the day-to-day pressures of government and has been able to maintain an expert and focused effort to guide UK climate-change policy. Drawing on an analogy with the constrained discretion and operational independence granted to the Bank of England in 1997 in the realm of monetary policy, it would be worth considering whether the UK CCC should be given more power to set policy instruments such as the new carbon price floor, tariffs and carbon-related charges such as the Climate Change Levy and the CRC EES payments (Bowen and Rydge, 2011).

6. Priorities for action, including those sectors of the economy crucial for creating the conditions for a green economy

6.1 The priority is to tackle the biggest market and policy failures—they do not all correspond neatly to industry sectors. Human-induced climate change results from the biggest externality that the world has had to face. It follows that the most pressing need remains to build up international collective action to bring down greenhouse gas emissions (Stern, 2009). Implicit or, preferably, explicit carbon pricing across the board should be a part of that action. The UK has been showing leadership in this regard but needs to rationalise and simplify policies designed to make emissions more costly.

6.2 The second imperative is to stimulate green innovation—including, but not limited to, low-carbon innovation. Credible carbon pricing will send a clear market signal that should spur innovation. However, the presence of additional market failures in innovation suggests the need for supplementary policies. The energy sector is central as far as greenhouse gases are concerned but innovation in transport, the construction industry, land use and urban design is also needed. So is product innovation in consumer markets. The barriers to successful innovation differ across sectors so some industry-specific measures are likely to be needed, as recognised in the current UK policy mix. But policy-makers are unlikely to be very good in anticipating where and when the key technological breakthroughs are going to arrive, so the emphasis should be on policy instruments with broad application—another reason why carbon pricing is key, because it provides a pervasive incentive to introduce low-carbon technologies (Aghion et al., 2010). Road-maps for the transformation of specific industries and the reduction of greenhouse gases sector by sector, such as those provided by the Committee on Climate Change, are a helpful way of demonstrating what can be done given our current understanding of technological options, but they should not be regarded as sacerdotals. Similarly, although general support for more spending on research and development is desirable, “top down” attempts to identify where comparative advantage will lie in international trade in the global green economy run the risk of picking losers.
7. What is the role of consumers, businesses, non-government organisations, and international bodies in delivering, and stimulating demand for, a green economy?

7.1 Policy-makers have a key part to play at international, national and sub-national levels, because of the central role of market and policy failures. But collective action does not need to rely entirely on statist solutions and legislative interventions. One also needs to encourage green entrepreneurship amongst businesses, as business organisations such as the CBI and shareholder corporate responsibility groups have recognised. Firms, trade unions and educational bodies can also help ensure that people acquire the new skills that will be required in the green economy. More generally, changes in values in civil society, as people understand better the environmental dangers and risks we face, are likely to drive the transition to a green economy. As with locking into the wrong physical infrastructure—which can have a long-lasting hard-to-reverse impact on emissions—so locking in mindsets that fail to recognise or limit carbon-intensive behaviour can make emissions reductions difficult to achieve later on. In both cases, early action to induce sustainable practices is required to avoid getting stuck on a carbon-intensive growth path in the long term (so-called “path dependency” on policy choices).

8. Do any models that more closely resemble a green economy exist elsewhere that the UK should aspire to?

8.1 The Columbia/Yale Environmental Performance Index for 2010 ranks the UK 14 out of 163 countries, suggesting that UK performance is creditable but not the very best (http://epi.yale.edu/Countries). In Europe, Iceland, Switzerland and Sweden all have a lot from which the UK can learn. The UK also rates quite highly with respect to the pace of green innovation, but it is well behind Japan, Germany and the USA and has not increased its efforts as rapidly as some emerging market economies—notably Korea and China (Dechezlepretre and Martin, 2010).

8.2 Quantitative measures risk giving a false sense of precision to international comparisons and the nations at the top of the various rankings are by no means ideal types whose policies for greening the economy the UK should emulate in all respects. Different countries will face different risks and opportunities as well as different institutional realities, so the most effective approaches and policies will differ correspondingly from country to country. But there is a lot to learn from best practices elsewhere.

9. How do the UK’s policies to deliver a green economy relate to actions needed to deliver a global green economy (a theme of the June 2012 Rio Summit)?

9.1 The UK’s long-standing commitment to action against climate change and its innovative statutory framework for policy-making in this area have both been helpful in inspiring action in other countries. So has its recognition that climate finance for poorer countries is vital in building the foundations for global collective action. More needs to be done on this front (Bowen, 2011; Fankhauser and Burton, 2011). As this note has suggested, the UK could also do more to price carbon efficiently and stimulate green innovation. Further moves in these directions would have beneficial spillovers to other nations. At the same time, the biggest stimulus to green investment and innovation would be private-sector anticipation of the growth of new markets.

9.2 The UK is not large enough alone to create the critical mass to drive global green innovation and investment, so it should join with other countries who see green policies as part of their broad growth strategies (including many developing countries) to stimulate market development. This nation and others need to avoid a mercantilist approach to new green industry opportunities. The government must work with EU partners to ensure that the inevitable linkage of trade and climate policies does not yield protectionism, but moves towards the establishment of a level playing field for green investment without discriminating among countries, firms or regions. The returns to collaborative action are great; going green is not a zero-sum game.

References


25 August 2011

Written evidence submitted by RenewableUK

Introduction

1. RenewableUK is the leading UK trade association in the renewable energy field, with approaching 700 members drawn from across the full spectrum of the value chain in the wind, wave and tidal stream industries. As such, our members will be key in the development of the green economy, both through generating the green electricity that will power that economy, and through providing jobs and investment in the supply chain. The UK has enviable natural resources in the sectors that RenewableUK covers, and thus has a huge opportunity to be a leading country in industries that will be crucial to the global green economy. However, governments at all levels have to recognise this opportunity and provide strong leadership so that we can capitalise on this natural advantage and the skills and aptitudes of our people. With this in place the UK can be prosperous whilst safeguarding our environment.

The Economic, Social and Environmental Outcomes that a Green Economy Should Aim to Deliver, and the Appropriate Tool and Indicators to Monitor Progress Towards Such Outcomes

2. Over the next decade a third of traditional energy capacity is due to be retired from the grid. This creates an opportunity to decarbonise our electricity system and create a green economy.

3. Creating a green economy represents a chance to create new skilled jobs, and alongside the other environmental, energy security and sustainability benefits, it is crucial that the UK harnesses this benefit for itself.


5. In RenewableUK’s view a green economy is able to, and should attempt to deliver: economic growth and investment; new jobs; a rebalancing of the economy with increased manufacturing jobs and a better regional spread of employment, alongside reduced carbon emissions.

6. One of the key drivers in job creation and investment is business confidence. RenewableUK therefore suggests it is essential to continue renewable energy targets and roadmaps to reassure manufacturers and job creators that there will be sufficient market and thus enable them to base themselves there.

7. Moving to specific monitoring, RenewableUK welcomes recent initiatives to grow the green economy but feels it is essential that these are tied together to enable a proper picture of development, and would urge Government to place overall coordination of different initiatives within a specific Department.
8. RenewableUK also suggests that it might be useful if the Department for Business, Innovation and Skills reported each year on green job creation across the UK, with the Devolved Government Departments in Scotland, Northern Ireland and Wales also reporting.

9. In recent decades, UK Governments of all parties have taken a market-led approach to industrial development, and have shied away from “picking winners”. This has been to an extent understandable given post-war experience of the industries that were selected for support, but the imperative to transform our economy, and the global economy, to sustainable patterns of production and consumption means that an element of direction will be required.

10. This new form of direction should not be in the form of selecting specific technologies or companies to benefit from subsidy or other support, but there must be clear policy indications of the direction of travel and support for the sectors that are deemed crucial for the green economy transition. This support should be “long, loud and legal”, ie be seen to be long term, given the high capital intensity of many investments in the field; of sufficient strength to bring forward the level of capital that is required; and underpinned by law. This will give clear signals to investors of where Government wishes to direct the economy.

11. Without this kind of clarity from the UK Government, investors will assign higher risk premiums to investments in the green economy, making the transition more expensive and difficult. This could allow other countries to make faster progress, and kill off any ambitions we may have to be a leader in key sectors.

12. With much of the new green economy dependent on natural resources, countries need to assess what they have to hand that will be the basis for new goods and services, and focus on those using the skills available to them. Technologies that are a good fit should be promoted, as these will have the best chance of success domestically, allowing the development of strong industries that will provide future export earnings. Investment should ideally go to where countries will be able to make a difference to the technology development and cost of the resource, creating first mover advantage.

13. For the UK, therefore, a focus on offshore wind, wave and tidal power is highly appropriate. With a leading position in deployment of offshore wind, the UK is now poised to develop a thriving domestic industry, which will make the innovations that bring the cost of exploiting this resource to competitive levels. This experience and knowledge will be highly saleable as offshore wind spreads to new markets across Europe, North America, East Asia and beyond.

14. The UK also has a leading position in wave and tidal stream, and is in an even better position to dominate these Industries in the future. This requires significant support, but should result in a very significant industry. Meanwhile, support for onshore wind should continue since, while the opportunity to be a leading nation in this sector is low, it is the lowest cost mass-deployment renewable generation technology for the UK, providing a moderate number of jobs whilst keeping the cost of the green transition low.

15. The practical barriers to deployment of these technologies have been well rehearsed by RenewableUK in many documents, and these can be supplied to the Committee if it wishes, but there are some generic barriers that also need to be addressed. The supply of engineering and technical skills is a concern right across the economy, and is crucial in allowing the UK to exploit its natural advantages. Many of the 88,000 employees mentioned above will need training in new technologies, and the capacity to perform that training needs to be developed. It should be noted that the supply of new graduates with the necessary skills will be insufficient to meet these needs, and thus attention will need to be paid to alternative routes into these new green sectors for mature entrants looking to use technical skills in new areas of the economy.

16. One overarching issue that affects many green technologies is finance. As mentioned above, if these areas are deemed risky, either because the technology is new or they are dependent on Government support, then the cost of capital may be prohibitive for investments that harvest natural flows of energy or material—where the “fuel” is free. Capital may also be of insufficient quantity to satisfy the demands of the green transition. RenewableUK thus welcomes the establishment of the Green Investment Bank, with the mission of “accelerating private sector investment” and an initial remit to focus on “high risk projects which are otherwise likely to proceed slowly or not at all” as a positive move towards reaching our targets.

The approach required to deliver a green economy, and the aspects of the current economic model that require development, eliminating and/or new approaches found. What tensions might there be between economic growth and the green economy? Would “greening” the economy deliver the outcomes needed?

17. The approach required to delivering a green economy is as set out above: create certainty around the objectives, and put in place clear policy that delivers the right incentives to steer investors to make the appropriate choices.

18. When analysing the policy choices in front of it, Government needs to take a more holistic view of the costs and benefits involved. For instance, when supporting renewable power generation technologies, a narrow focus on the cost of supporting that electricity may not take into account savings elsewhere. Since variable renewable generators like wind have very low marginal costs, they always run when available. This “pushes
out" the most expensive marginal cost plant on the system at the time, thus lowering the wholesale price of electricity for everyone. This is known as the "merit order effect", and analyses of it in Germany and Denmark show that is can provide savings of similar order to the additional cost of supporting renewables.

19. A further benefit that is not usually priced into assessments of costs and benefits is the value of providing power at stable prices. This can be likened to the purchase of a price hedge against the cost of other sources, notably gas. This can be valued, and should be accounted for when taking a view of the affordability of policy to support renewables.

20. This holistic view should also extend to the wider economic activity engendered by alternatives. For instance, replacing coal generation with gas fired power may reduce carbon emissions cost-effectively, but leaves the UK more dependent on imports and results in fewer jobs and less investment in the UK economy than if that coal generation were replaced with renewable power. With such holistic views of technology choices, the perceived costs of renewables may be seen to be higher than they actually are.

21. When it comes to Government action, there needs to be alignment of agendas across Departments—the green transition affects many different and disparate sectors, cutting across Governmental boundaries. In particular, DECC, BIS and Treasury have to be closely aligned, with a common vision and assessment of costs and benefits. It needs to ingrained across these three Departments that all decisions need to be seen in the light of the green economy vision, even where it not immediately apparent that decisions have a green dimension—the green economy is the whole economy, not a specific silo. Other Departments like Defra and DIT are also important to promote coherence, for instance in matching ambitions to electrify road transport and decisions about electricity supply.

22. Other alignment of incentives is both possible and necessary. In particular, the incentives available to the electricity network companies should be aligned with the objectives of delivering the low carbon economy. At present, there is no direct benefit to National Grid, the Scottish Transmission Owners and Distribution Network Owners of accelerating the connection of renewable generators to the grid. Ofgem's focus on low-cost solutions can lead to options for grid development being pursued that run into long planning delays, notably for high-voltage overhead lines. If network companies can see a benefit of bringing forward connection, then they could opt for less difficult options that may cost more but result in a swifter transition to a low-carbon economy, to the benefit of everyone. RenewableUK, during the process of the RIIO-T1 price control review, has proposed a new "Low Carbon Economy Incentive" to promote just such outcomes. We have commissioned further work to detail alternatives for such an incentive with a view to having it adopted in future price controls, particularly for distribution networks.

23. The wind and marine renewable industries offer significant supply chain opportunities for the UK to rebuild its manufacturing base.

24. In offshore wind, whilst the UK leads the way in deployment, the proportion of UK content on the projects to date has been low. However, there are strong grounds for optimism that the UK is making inroads to address this imbalance, with the emergence of new UK suppliers such as Burntisland Fabrications in Fife, TAG Energy on the Tees, and JDR Cables in Hartlepool.

25. The major opportunity, however, lies with the establishment of UK based turbine manufacture, and due to the size of the UK market, coupled with Government support such as the creation and retention of the £60m ports infrastructure fund in 2010, the UK has established itself as the leading inward investment destination. The UK has already attracted announcements from Siemens, General Electric, Vestas, and Gamesa that they intend to manufacture their next generation of offshore wind turbines in the UK, creating thousands of high quality jobs and many more in the supporting supply chains.

26. It cannot be emphasised enough that the key to successfully converting announcements into fully operational factories is long term confidence in the UK market for offshore wind retaining its leading position within Europe. The actions necessary to maintain this confidence are detailed in our earlier commentary on policy drivers for offshore wind that can be supplied to the Committee on request.

27. Further, it is important to recognise that the UK is in competition with other European countries to attract the supply chain investments that will drive the construction of the UK's and other European offshore wind capacity. If the UK is to capitalise on the manufacturing opportunity for offshore wind, then the necessary quayside and economic infrastructure needs to be in place. In addition to the retention of the £60m ports infrastructure fund, RenewableUK welcomes the establishment of Enterprise Zones following the creation of Local Enterprise Partnerships, four of which have identified offshore renewables as a strategic priority aiming to create renewable energy hubs. Other Government initiatives such as the Regional Growth Fund and Marine Energy Parks are welcome, however RenewableUK has concerns that unless there is clear leadership and coordination of these initiatives, the resources that are available to stimulate supply chain growth will not be used to their full effect.

28. A prime illustration of this is that despite the Regional Growth Fund (RGF) providing a key role in leveraging new private sector investment for sustainable development, the bidding for the majority of the
£1.4bn fund was concluded in June 2011 before the establishment of the Enterprise Zones and maturation of the LEPs, which are best placed to take advantage of its benefits. Therefore a priority for action to ensure the establishment of a healthy offshore wind industry is better co-ordination of initiatives, together with appropriate continued funding, potentially via an extension to the RGF to ensure that the UK realises the opportunity of becoming Europe’s leading offshore wind industrial base with the creation of tens of thousands of new jobs.

The role of consumers, businesses, non-government organisations, and international bodies in delivering, and stimulating demand for, a green economy

29. RenewableUK does not wish to comment on this question.

Whether any models that more closely resemble a green economy exist elsewhere that the UK should aspire to; and how the UK’s policies to deliver a green economy relate to actions needed to deliver a global green economy (a theme of the June 2012 Rio Summit)

30. RenewableUK feels that Germany represents a good example of renewable energy legislation which has aided the green economy in that country.

31. Germany has issued a series of laws aimed at promoting renewable energy development and consumption. Efforts began with federal government research and development support for wind turbine development in 1974. A federal Electricity Feed Law (StrEG) was adopted in 1991 and became the most important instrument for the promotion of renewable energy in Germany during the 1990s. It obligated public utilities to purchase renewably-generated power from wind, solar, hydro, biomass and landfill gas sources, on a yearly fixed rate basis, based on utilities’ average revenue per kWh. In 1999, Germany introduced the Market Incentive Program (MAP), which offered government grants totaling €203 million in 2003 for the commercialisation and deployment of renewable energy systems. The Renewable Energy Law of 2000 (EEG) aimed to facilitate a doubling of renewable energy’s 1997 share in the power generation fuel mix by 2010—to a minimum of 12.5%. The EEG’s remuneration system is based on a fixed, feed-in tariff for renewable sources with fixed annual degression for new generators. Finally, as a member of the European Union, Germany is also obliged to adopt a national target for the expansion of renewable energy’s share in Europe’s fuel mix.

32. In the broader policy arena, there has been government research and development support for wind turbine development; a feed-in tariff established by the EEG; government grants for commercialisation and deployment of renewable energy systems; the Electricity Feed Law requiring public utilities to purchase renewably-generated power; and a national target for the expansion of renewable energy’s share in Europe’s fuel mix.

33. Between 1990 and 2003, renewable energy’s share in Germany’s electric power generation fuel mix grew from less than 3% to almost 9%. Aside from environmental benefits this has led to green job creation and an increase in domestic production and deployment of wind and solar systems—as of 2005, exports accounted for approximately 20% and 10% of wind and solar photovoltaic production.

30 August 2011

Written evidence submitted by Friends of the Earth England, Wales and Northern Ireland

SUMMARY
— Moving to a green economy is extremely urgent, for all countries, including the UK. Climate change is one of the greatest threats humanity faces, and other environmental limits have already been crossed—the environmental impact of all economies must be heavily reduced to stay within environmental limits.
— This move is also necessary to protect the UK— as North Sea oil and gas run out—and is a major economic opportunity, as global markets for environmental products and services grow rapidly.
— The Government has not adequately defined what it means by a green economy—the concept of environmental limits barely features.
— Not all of Government yet grasps the opportunities of delivering a green economy, or the dangers from not doing so. The majority of Government has not accepted the scale of transition required.
— Recent moves by Treasury to redefine sustainable development as meaning “yes to all development” (whatever its type) are deeply damaging to any attempts to deliver a green economy.
— The Green Economy Roadmap is deeply disappointing, but greater damage will occur as a result of the “Plan for Growth” and the new “National Planning Policy Framework’s obsessive focus on growth” with no thought to the type of growth.
— To deliver a green economy the Government needs to:
  — Put sustainable development (its real definition) and environmental limits at the heart of its growth plans, as well as in its Green Economy Roadmap
  — Integrate its green economy plans with action to deliver a “just” economy
  — Put in place greater targeted interventions to support new industries
— Strengthen jobs and skills strategies
— Reform procurement policy
— Strengthen specific policies, for example on the Green Investment Bank, Electricity Market Reform, Feed-in-tariffs and the Green Deal.

The Challenge

1. Moving to a green economy is extremely urgent, for all countries, including the UK. Climate change is one of the greatest threats humanity faces, and other environmental limits have already been crossed\(^2\)—the environmental impact of all economies must be heavily reduced to stay within environmental limits.

2. Reducing our use of environmental resources is also imperative for other reasons—in the UK we face ever-increasing costs for the imports of fossil-fuels as North Sea oil and gas run out, and the Beddington report is very clear that we face ever-increasing economic and social risks from our high consumption and imports of other environmental resources, such as water, metals and land.

3. This move is also an opportunity—the rapidly increasing size of the global market for environmental goods and services is a huge and well-documented economic opportunity for the UK to develop new industries and technologies, which will help the UK develop a more diverse and stable path out of its current economic difficulties.

What must a green economy look like?

4. A green economy is an essential element in delivering sustainable development. The Government’s 2005 sustainable development strategy is clear that the goals of sustainable development are:

“living within environmental limits and a just society, and we will do it by means of a sustainable economy, good governance and sound science”.

5. The strategy is also clear that a sustainable economy is one that “provides prosperity and opportunities for all” and delivers on “living within environmental limits” and “ensuring a strong, healthy and just society”.

6. In our view therefore, a strategy for a “green” economy must be explicit that it is primarily aimed at ensuring that our economy stays within environmental limits, at the same being integrated with strategies to deliver a “just” economy—prosperity and opportunities for all.

7. The 2005 strategy was a marked improvement over the 1999 strategy, in that it was very clear that the type of economic activity matters. This analysis has continued under the present Government— in November 2010 David Cameron’s well-being speech\(^3\) made it clear that the type of economic matters, and the 2011 BIS strategy also makes this point, saying: “The UK needs to grow sustainably—both economically and environmentally. We need to grow, but we need to grow differently”\(^4\). However, in practice this view is not being acted upon.

But...Green economy in practice

8. We are extremely concerned however that in practice the Government, and in particular the Treasury, are reverting to the old 1999 view that it is simply growth that matters, whatever its type, and that all types of growth must be promoted. There is clear conflict on this within Government, and the growth-at-all-costs side is winning. In the medium and long-term this will be ruinous for the UK economy and environment.

9. The most powerful recent documents—the Treasury’s Plan for Growth, and the new draft National Planning Policy Framework—heavily distort the meaning of sustainable development. Both redefine sustainable development without justification to say there will be a: “powerful new presumption in favour of sustainable development so that the default answer to development is ‘yes’.”

10. This represents a re-emergence of the old Treasury view that growth-at-any-costs is all that counts, and that any environmental or social damage that results can be dealt with from the profits of that growth.

11. The tension between sustainable development and the Treasury’s attempted redefinition is most explicit in BIS’s statement that “Growth is the Government’s top priority and every part of Government is focused on it. But we need to grow differently”. At present, there is far too little attention paid to the “grow differently” part—if the Treasury wins the argument that the default answer to development should be yes, then there will be a development free-for-all, both green and non-green growth will result, and the UK will not stay within environmental limits.

12. The recently published policy roadmap (“Enabling the Transition to a Green Economy: Government and business working together”) could have been the place to re-assert the primacy of sustainable development, but it does not do this. It:

— fails to present a compelling picture of what a sustainable economy means in practice. It does not demonstrate how it will stop us further exceeding environmental limits or promote a more just society;
— is unashamedly pro-growth: business as usual, but with a green tinge. This is another step away from the pursuit of genuine sustainable development;
— is essentially a list of policies that have already been announced elsewhere: certainly not a coherent strategy; and
— is in conflict with other parts of Government policy; the Natural Environment White Paper (2011), for example, commits to “put natural capital at the centre of economic thinking and at the heart of the way we measure economic progress nationally”\(^5\), but this is not restated in the roadmap. Nor does it adopt the UK definition for a sustainable economy, as set out in the Sustainable Development Strategy.

What change is needed?

13. Overall, we see three fundamental problems with the Government’s actions on a green economy:

14. First, the overriding priority is just growth. The Government’s attitude towards the green economy appears to be largely that if there is some green growth, then great, and they will promote it up to a point. But there is just as likely to be non-green growth in other areas. There is no overall strategy to ensure that the whole economy is green—i.e. staying within environmental limits. A strong indication that this point is not grasped is that the major and clear environmental limit the UK Government has committed to addressing—the Climate Change Act and its carbon budgets—is not mentioned in either the Green Economy Roadmap or in the Plan for Growth. The Green Economy Roadmap and the Plan for Growth need to be rewritten to be much more explicit that the type of economic activity is critical, and that when the Government says “we must grow differently” that they have a strategy to ensure that overall growth is within environmental limits and delivers for all people.

15. Second, the actions even to promote “green” industries are, in total, weak. We are behind other countries. We promote environmentally damaging alternatives as well as green industries, as seen by the recent rash of consents for new high-carbon gas-fired power stations. The Committee on Climate Change repeatedly reports that the UK’s policy suite is inadequate to deliver on existing UK carbon budgets, which are themselves only delivering on a 50:50 chance of avoiding a two degree temperature rise, an unacceptably high level of risk. In paragraphs 30 to 65 we highlight some policy examples we believe must be strengthened.

16. Third, action on the green economy is not coordinated with action to deliver a just economy. There are big opportunities and threats here. A much greater drive to promote renewable energy can create jobs and new industries in regions such as North East England, an area already suffering from major poverty and unemployment, which is set to get worse as public sector job cuts kick-in. A much greater drive to promote energy efficiency will also create jobs, cut carbon and reduce the major societal problem of fuel poverty, which affects millions of mainly poorer households. These potential synergies are not being acted-on.

17. We believe that two barriers to addressing these problems are that:
— Not all of Government yet grasps the opportunities and threats of delivering on a green economy—see paras 19 to 25.
— The majority of Government has not yet grasped the scale of transition required—see paras 26 to 29.

18. We set out areas where policy and strategy could be strengthened in paras 30 to 65.

Failing to Grasp the Benefits of the Green Transition

19. The Roadmap notes the £4 trillion global market for low-carbon products by 2015. Yet a recent international league table of investment in clean energy presented by the Pew Environment Network\(^6\) shows that the UK dropped sharply, from fifth in 2009 to 13th in 2010. Further analysis by Friends of the Earth\(^7\) shows that on a per capita basis the UK spends ten times less per head of population spent on green energy in the UK ($52) than in Germany ($508) and considerably less than Italy ($228), Canada ($165), Australia ($150), the USA ($109) and Spain ($102).

20. The Public Interest Research Centre (PIRC) notes that less than 1% of UK GDP is “green investment”\(^8\)—half of what South Korea currently invests in green technologies annually, and less than what the UK presently spends on furniture in a year.” As a proportion of GDP, the UK (combined public and private spending) spent less on renewables in 2010 than Germany, Italy, China, Canada, Spain, Australia, Brazil, the USA and France—yet has far higher GDP than many of those nations.\(^9\)

21. Differences in international reaction to the financial crisis tell their own tale. PIRC notes that: “during the round of financial stimulus packages issued in the wake of the credit crunch, many governments chose to include significant injections of money for green measures… the UK fell short. An estimated 6.9% of its stimulus programme was devoted to green investment; contrast this to the US (11.5%), China (34.3%), France (21.2%) or South Korea, where an astonishing 80.5% of its financial stimulus was spent on clean energy investments”. PIRC also notes that venture capital investment in green technology in the USA recovered during 2010 but in the UK fell to its lowest level since 2003.
23. Even the UK’s limited green stimulus programme was criticized for attempting to look greener than it was—for example, the car scrappage scheme did not follow the lead of programmes in other European countries by requiring new cars purchased to be “green”.  

24. Recently Government has stopped all funding for the Carbon Trust, which played a major role in early stage venture capital and project support for critical technologies—for example, through its Offshore Wind Accelerator, which brought together developers to speed up research and development and reduce shared costs. It has hamstrung the new Green Investment Bank, subordinating it to cutting the deficit, despite the vital role of the Bank to kickstart the very economic recovery the Government desires (see below).

25. Such short-termist decisions allow political space for lobby groups to propose dangerous lurches in policy direction—for example, walking away from the UK’s 2020 Renewables target on the basis that meeting it will be difficult and allegedly costly. Yet the need for policy certainty and stability and for the very reason why long term targets are set in the first place—to set clear signals for the future direction of Government policy, which guide and to an extent define the “cost-effectiveness” of investment decisions on the basis of an imperative that must be met. As Lord Stern and others have made clear, a short-termist approach is precisely the wrong one to take when dealing with the inherently long-term problems of environmental limits and viable future economies.

**Failure to Grasp the Scale of the Challenge**

26. The Government’s prime emphasis in its vision for a green economy is one that will “maximise value and growth” and which will “grow sustainably and for the long term”—while “environmental impacts are reduced”. But a clear problem is that this overview document does not set out by how much environmental impacts need to be reduced.

27. There are three main problems. First, the Government’s climate change strategies do not reflect the advice of the Committee on Climate Change. The CCC have repeatedly said the Government’s policy suite needs to significantly strengthened; the Government has also not adopted the CCC’s critical target for 2030 electricity sector decarbonisation.

28. Second, the CCC’s advice is itself based on exceptionally high levels of risk. Its carbon budgets are based on a 56 to 63% chance of exceeding a two degree temperature rise—a limit which has itself been shown by recent climate science to be far more dangerous than previously thought. A greater than 50% chance is unacceptably high risk for something the Government has repeatedly said we must avoid.

29. Third, the UK needs to set clear targets for other environmental limits, not just on climate change.

**What Needs to be Done**

30. Overall, what is lacking is a coherent, pro-active, muscular policy approach. We advocate action in five areas:

   - Put the correct definition of sustainable development at the heart of growth and green economy plans (see above).
   - Targeted intervention to support new industries.
   - Investing in and supporting skills and job creation nationwide.
   - More proactive procurement policy.
   - Strengthened policy on:
     - Energy-intensive users.
     - Feed-in-tariffs.
     - Green Investment Bank.
     - Electricity market reform and carbon floor price.
     - Green deal.
     - Local economies.

**Targeted Intervention to Support New Industries**

31. As the Aldersgate Group (a coalition of businesses, NGOs and politicians of all parties) makes clear in its March 2011 report, *Greening the Economy*, there is a strong case for targeted interventions to capture first-mover advantage and help the UK economy compete internationally:

   “The UK is losing momentum in the green economy race and there is only a small window of opportunity to assert leadership in the years ahead. A strong regulatory and fiscal framework will be vital for success, combined with a concerted push to get behind those sectors that have competitive advantages.”

32. A recent pamphlet from Demos summarises the stance of the current, and previous, Government on fostering innovation and new industries:
The view of the current government—shared by its predecessor—is that the role of the state in spurring innovation is simply to provide the "conditions for innovation to flourish". The UK Government states that if it invests in skills and a strong science base, ensures a strong legal framework within an amenable macroeconomy, and supports entrepreneurial clusters, then the market will do the rest through the incentive of the profit motive.\(^\text{13}\)

33. This is an ideological approach to market stimulus which is clearly reflected throughout the roadmap, and indeed Government policy more generally. Yet the depth and urgency of the required transition to a low carbon economy, and the mounting pressure of international competitors—coupled with policies that are not always fully up to the job—calls for of the a much more pro-active strategy for nurturing new technologies and industries. Demos continues:

"the role of government, in the most successful economies, has gone way beyond creating the right infrastructure and setting the rules. It is a leading agent in achieving the type of innovative breakthroughs that allow companies, and economies, to grow, not just by creating the "conditions" that enable innovation. Rather the state can proactively create strategy around a new high growth area before the potential is understood by the business community".\(^\text{15}\)

34. There is an inherent irony in the Government’s roadmap. It simultaneously acknowledges the pace of overseas investment in countries such as China and India and highlights the potential of the £4 trillion 2015 global market in low carbon goods and services. It sets out its desire for UK businesses to take advantage of these expanding markets and "exploit comparative advantage". Yet the roadmap sidesteps the fact that countries such as China are3 streaking ahead in large part because of their strategic, strongly interventionist approach.

35. According to Pew, in 2010 China accounted for almost 50% of all manufacturing of solar modules and wind turbines. Most of the solar panels were destined for the export markets, cementing China’s position as the dominant force in the global market for panels; yet the wind turbines were largely used domestically.

36. In 2010 China installed 17 GW of wind power. Pew notes this is down to single-minded determination from the Government, with its "aggressive clean energy targets and clear ambition to dominate clean energy manufacturing and power generation". Compare that to the components in the new London array, where 90% were manufactured outside the UK.\(^\text{14}\) An extensive review of overseas offshore wind development by IPPR concluded that a critical factor in the countries studied is a coherent programme of industrial activism, in the form of "tax incentives, favourable customs duties, quality certification, R&D support and ... local content requirements"; and a strong skills base.\(^\text{15}\)

37. The Government honoured some, but by no means all, of the industrial stimulus commitments it inherited from the previous Government. Its decision to maintain the £60 million of funding for ports upgrades to handle offshore wind turbines, the £20 million grant of support for electric car manufacture at Nissan in Sunderland, and the up to £5,000 subsidy for individuals to take-up electric vehicles are all the kind of kickstart that the green economy needs if it is to keep up with, never mind exceed, the ambitions of its international competitors. But even the commitments it inherited were too scant, and others were not honoured, such as the decision to pull the plug on its commitment to finance and support a national roll out of electric charging points.\(^\text{16}\) New announcements, as opposed to restatements of existing commitments, have been noticeable by their absence over the past year.

38. Overwhelmingly, the Government’s policies to deliver a green economy are focused on price signals, tackling market failures, voluntary agreements, and occasional regulation. As Tom Burke has noted:

"the view that government cannot pick winners and that technology choice must be left to the market is deeply entrenched in our political culture... but it is equally true that markets are often not very good at picking winners. We have just had a brutal wake up call about the dangers of leaving systemic risks to be managed by the market in the financial world".\(^\text{17}\)

39. Recommendation: the Government must produce an industrial policy which does more than just set price signals, but directly supports the technologies and industries that are critical to the green economy.

**Investing In and Supporting Skills and Job Creation Nationwide**

40. A major study into "green jobs" conducted by the IPPR in March 2009 concluded that "without smart government intervention, the UK will struggle to benefit from new "green" industries and the workforce is unlikely to be equipped with the right skills to work in the future low-carbon economy."\(^\text{18}\)

41. The Government is fond of presenting big figures for theoretical job creation, but not backing up its policies with specific skills and job strategies to make those jobs a reality. Chris Huhne has claimed that 70,000 jobs could be created in offshore wind, and 250,000 as a result of the Green Deal.\(^\text{19}\)

42. These are admirable goals, but huge acceleration in progress is needed—for example only 4,000–6,000 people are currently employed in wind in the UK, compared to 20,000 to 30,000 in Spain, and 80–85,000 in Germany; the Carbon Trust has recommended that the offshore wind industry needs between £100 million to £600 million of public research, development and deployment investment between now and 2020 to fully meet this potential growth.\(^\text{20}\)
43. Meanwhile the Government has said that it is aiming for 14 million homes to be improved under the Green Deal by 2020. That works out as over 4,000 homes every day. The Federation of Small Businesses and Federation of Master Builders have called on the Government to pull out the stops to make sure the nearly 200,000 SME contractors working in the construction industry are able to help meet what could be extraordinary demand. \(^{21}\) However the response from the Government has not been adequate, committing to funding at 1,000 Green Deal apprenticeships.

44. There is concern that the changes that face the UK economy could mirror those of the 1980s, where wholesale upheaval in the UK’s manufacturing and industrial base left entire communities desolate, from which many have never fully recovered. That cannot happen again. It is vital to the success of the green economy that it reaches all parts of the UK. The Government must directly support retraining and re-skilling in areas that may have already experienced, or potentially face, major changes as a result of the move to new industries and practices. This must be a core consideration of a new skills strategy, and the skills and jobs policies that must now accompany every major policy designed to speed the green transition.

45. Recommendation: Government must complete the work of its predecessors and produce a green jobs and skills strategy, including providing necessary state funding to support skills academies and training (and retraining) programmes nationwide.

**Procurement**

46. The Roadmap is disappointing in its analysis of the broader and longer-term economic impacts that Government procurement can have. It is clear that “value for money” is the driving factor in awarding procurement contracts. Although this is an important consideration its overriding primacy can place low-carbon industry in the UK at a further disadvantage compared with international competitors who have had greater and more sympathetic policy support from their own Governments in previous years.

47. A relevant example is the Government’s recent decision to award the £1.4 billion contract to build trains for the revamped Thameslink project not to UK-based Bombardier, but instead to Siemens of Germany. It was a decision taken, said the Prime Minister, simply because Siemens’s bid was cheaper. As a more or less direct result, it was announced in August 2011 that the Bombardier factory is to close. As a welder at the factory said, “they’ve just gone for the bottom line rather than the bigger picture—what this could mean for the whole country and industry”. \(^{22}\)

48. The Government’s claims that it is bound by EU procurement rules are disputed by the union, Unite, whose spokesman claimed that:

> “I don’t know of any procurement that’s been in France or Germany that has gone to any other company other than the indigenous rail manufacturers in their countries. So if they’re playing by the same rules that we are, or at least we’re professing to play by the same rules, then something else has gone wrong and it’s no good the government saying they can’t do anything about it.” \(^{23}\)

49. Recommendation: The Government must use its procurement muscle to, firstly, invest in low-carbon products and services, and secondly, to support UK industries.

**Policy Robustness and Stability**

50. Friends of the Earth has broadly welcomed the principle of virtually all of the individual policies that are set out in the “roadmap”. However too often the top line ambition and rhetoric of the policies is not being honoured by the substance of the policies themselves.

51. The UK’s Climate Change Act set a framework from which suitably ambitious policies are intended to flow. Yet the Committee on Climate Change has repeatedly warned that a “step change” in Government efforts is needed to meet even the first three carbon budgets, let alone the fourth. Policies must be strong enough to keep up with the increases in carbon reduction and resource efficiency that are needed. Some major policy areas are:

(a) Energy Intensive Industries

52. The Government is concerned about the potential impact of its climate change policies on energy intensive industries (EIIs) and will outline a package of measures to support them later in the year. Industries such as steel, cement and ceramics will be vital for low-carbon manufacturing and it is right that the Government acts if there is a real danger of industry suffering in the UK. However there is simply as yet no compelling evidence base to suggest that climate change policies are threatening the competitiveness of EIIs in the UK. Indeed a preliminary study by DECC in July 2011 concluded that it is the rising costs of fossil fuels that are overwhelmingly pushing up energy prices (for domestic and industrial consumers alike). It is revealing that the first of 13 recommendations from the Confederation of British Industry was to actually develop an evidence base. \(^{24}\) It is correct to help all industries through the low carbon transition, but until and unless there is concrete evidence that climate change policies themselves will cause an exodus of UK industry, the Government should reject the watering down of these policies to appease the energy intensive—or indeed any—sector. A stable policy environment is critical to the transition to a green economy, and fundamental to investor confidence.
53. Strong policy design can kick-start major new industries. According to Pew, in 2010, 88% of Germany’s $41 billion investments in clean energy were in solar technology, almost all of which were directed to small-scale projects on rooftops. Pew accords Germany’s high production and usage of solar panels to its “long history of using feed-in tariffs to prop up investments”.

54. Contrast that to the UK, where the Government’s constant and disastrous tinkering with the Feed in Tariff (FIT) for decentralised energy has appalled the nascent and vulnerable renewables industry. The decision earlier in 2011 to slash the FIT for projects larger than 50kw—ostensibly to limit the spread of “solar farms”—is in practice likely to also end investment projects in schools, communities and hospitals and set back growth in the industry, and indeed has already done so.

55. The renewables industry heavily criticized the Government’s move not just in terms of its impact on vital green energy schemes but also job creation, retention and skills development in the UK’s renewables sector. For example, Andrew Lee of Sharp Solar has said:

(a) “the announcement effectively destroys the solar industry for installations above 50kw... this is terrible news for the renewable energy sector—the steep rise in job creation will stop and morale within the industry will drop as a result of this remarkable u-turn.”

56. It is no longer essential that the Government uses its comprehensive review of the scheme to give the industry certainty and stability and bring back a level of investor confidence.

57. However, the current framework of the review is not set up to deliver this. The aim of the review is to keep the total spending of the scheme within a financial cap that the Government placed on the scheme during the course of the CSR. As such Friends of the Earth is fearful that, like the fast-track review, levels of support for technologies will be set in an arbitrary fashion, rather than on what the policy is trying to achieve. The timing of the review is also looking to be problematic. A key concern of the fast-track review was that the date that new levels of reduced support began was within a very short period of time after the announcement, which in effect meant because of development timelines that projects already begun have become unviable and unable to go ahead. The new levels of support following the comprehensive review of all technologies and scales under the scheme are due to start on 1 April 2011, but the proposed levels of support have not yet been announced, and the consultation originally due in June has been delayed until October. The industry is effectively in hiatus in the meantime.

(c) Green Investment Bank

58. Securing major tranches of investment is an integral part of delivering a green economy. Friends of the Earth was one of the leading organizations calling for the creation of the Green Investment Bank, and its progress is welcome. We have commended the Government for committing to enshrine the Bank in legislation and that it will, eventually, have full and independent borrowing powers and that it will be able to borrow from the capital markets. But as the EAC has itself pointed out, it is unacceptable that the Bank is to be prevented from borrowing until the deficit has been eliminated in, optimistically, 2015–16 at the earliest. Until then it is a hamstrung quasi-Bank which underlines the corrosive influence of short-termist Treasury thinking over taking the bold decisions that are needed. To delay lending the Bank misses the point—-it can and must play a central role in helping kickstart the very economic recovery the Government needs to get the deficit under control, institutional investors the UKSIF, representing assets of over £500 billion, gave evidence to the EAC that linking the Bank’s borrowing to progress on the deficit “does not give investors the certainty they need”.

59. The Bank must be permitted to borrow from the capital markets as soon as it starts operating, and swiftly enshrined in legislation.

(d) Electricity Market Reform and the Carbon Floor Price

60. The proposals in the Electricity Market Reform White Paper and the related Carbon Floor Price set out in this year’s Budget, are flawed and look set to be a major missed opportunity. The Government expects its plans to bring forward £110 billion in investment in new infrastructure. Friends of the Earth agrees that this investment is urgently needed and that the current structure of and incentives for the electricity market is wholly unsuitable to deliver it. But the Government’s plans aren’t the groundbreaking shift that is really needed.

61. The EMR proposals:
   — Do not set out a clear target for the decarbonisation of the electricity sector. This conflicts with the recommendation of the Committee on Climate Change that the aim should be to reduce average emissions to around 50 gCO2/kWh by 2030—a target which is in the CCC’s view consistent with the “absolute minimum” effort needed to keep on track towards the UK’s legally binding 80% by 2050 emissions reduction target. The Government must adopt the target recommended by the CCC if it is serious about meeting its obligations under the Climate Change Act.
A re too heavily focused on building new generating plant, rather than cutting the need for them through ramping up energy efficiency, smart grids, storage and connections with other European countries. Energy security is at least as much about needing to generate less energy than where the energy itself comes from. The demand side, including overall demand reduction and strategies for tackling peak capacity, including demand-side response, storage and interconnection, must be placed on an equal footing across the EMR proposals, not merely mentioned in the context of the capacity mechanism.

Consideration must be given to how demand management and reduction can participate in the long-term contracts available under the Feed-in Tariff arrangements.

Will promote investment in new nuclear and gas power stations, at the expense of renewables. Gas is less polluting than coal, but it is still very high-carbon. Nuclear power has unresolved issues with disposal of its waste, and is an unnecessary risk. It is our view that the future energy mix can and should be based primarily on renewables, with no room for new nuclear power stations or additional gas to that already under construction or consented. The Government must set an ambitious target for renewable energy beyond 2020, abandon its wide range of proposals for nuclear subsidy (including the eligibility of nuclear for any new Feed in Tariff), and tighten both its proposed Emissions Performance Standard, and the recently adopted National Policy Statements to prevent a new dash for gas.

62. Meanwhile the Carbon Floor Price:

— will not by itself stimulate investment in low-carbon technology. The low starting price makes it ineffective in the short term, and due to the need to raise the rate at each Budget, it is subject to considerable political risk in the long term. Without redirecting the revenue towards domestic energy efficiency measures (see below) or incentives for greener business practices, it represents an exceptionally expensive way of cutting carbon (if it does so at all) and is likely to further erode the public image of “green taxation”.

— Delivers a windfall gain of up to £1 billion for existing nuclear (and renewable) plants between 2013 and 2026; this should be captured for the public through an additional tax on nuclear and affected renewable operators.

(e) Energy Efficiency/the Green Deal

63. The Green Deal will help many people and businesses make energy efficiency improvements to their properties. But the Green Deal is very unlikely to be a genuinely revolutionary programme. Research suggests that the interest rates which are likely to be attached to the scheme are going to be unattractive to consumers. Even with widespread take-up, the fundamental mechanics of the Green Deal—the “Golden Rule”, whereby all energy efficiency measures must pay for themselves over the period of the loan—mean that the Green Deal will not be able to deliver the kind of comprehensive, whole-building retrofits needed to safeguard householders and businesses from looming energy prices and the rising scandal of fuel poverty.26

64. More funding for energy efficiency is needed. The new Energy Company Obligation, which is intended to reach the parts that the Green Deal cannot, in particular the fuel poor, is going to be spread too thinly and its size is limited by the fact that it ultimately ends up on bills. A solution is to redirect environmental taxation coming into the Treasury via EU ETS auction receipts and the Carbon Price Support to bolster support for energy efficiency funding. The EAC was clear on this notion in its report on green taxation (June 2011).

(f) Local economies

65. A green economy will not just be a national phenomenon. All local areas must centre around flourishing low-carbon, resource-efficient and sustainable economies. Yet local authorities are not, in general, doing enough to play their part in the transition to a green economy. Trailblazers aside, the combination of brutal funding cuts from Whitehall and the lack of a statutory framework means carbon reduction and resource efficiency is simply not on most councils’ priority lists. A survey conducted by Friends of the Earth in early 2011 showed that fewer than a third of councils have any kind of medium-term (2015-35) carbon reduction target, and most of those are far lower than the level of ambition needed. The roadmap places heavy emphasis on voluntary agreements, describing them as the Government’s preferred way to get things done, yet the lack of comprehensive progress in local carbon reduction is evidence of where a voluntary approach has failed. All local authorities should be required to produce climate change strategies for their local areas within the Energy Bill—or there is a deep risk that whole areas of the UK will simply not be part of the national push for green employment, skills and industry.

References


3 http://www.number10.gov.uk/news/pm-speech-on-well-being/


Friends of the Earth, op cit.


Carbon Trust, op cit.


BBC, op cit.


1 September 2011
Written evidence submitted by the Aldersgate Group

Aldersgate Group (AG)

The AG is an alliance of leaders from business, politics and society that drives action for a sustainable economy. The views expressed in this document can only be attributed to the AG and not individual members.

Summary

— A flatlining UK economy, rising unemployment and dramatic falls in the FTSE have led to renewed calls to accelerate the shift to a green economy.
— How each nation addresses the challenges of a resource constrained world will increasingly determine its future economic competitiveness. Economies must be transformed to provide rising prosperity to citizens, strengthening new growth sectors and modernising traditional sectors.
— An effective transition to a sustainable economy will lead to economic value and investment being more secure and less vulnerable to resource price shocks and market speculation. This will boost the economic recovery, create jobs, increase resource security and help make Britain more globally competitive, as well as meeting other government objectives of local regeneration and enhancing high-tech manufacturing.
— This does not need to be achieved through a major injection of public spending but will require more active government intervention to stimulate private sector investment in the short-term that will maximise returns in the long-term.
— The Government should implement a comprehensive green growth strategy that will mobilise private capital at scale to invest in green infrastructure and employ a low carbon army to design and develop low carbon systems and retrofit the UK’s homes and businesses.
— The UK is losing momentum in the green economy race and there is only a small window of opportunity to assert leadership in the years ahead.

(a) Outcomes and Monitoring Progress
— The AG welcomes the broad definition and outcomes of the Government’s vision for a green economy, set out in Enabling the Transition to a Green Economy (ETGE) but this should be developed with reference to increasing natural capital, the impact on employment and the social aspects of sustainable development.
— Measurable benchmarks should be consistent with this broad scope rather than the narrow target of increasing low carbon investment in the Plan for Growth.
— The number of green jobs should not be a green economy indicator as it is complex to define and the ambition is for all jobs to be green.

(b) Barriers
— There are a number of market or system failures that are holding back the transition to a green economy, including prices, finance, taxation, skills, innovation, procurement and planning.
— These must be addressed by more accurately pricing environmental externalities, an ambitious Green Investment Bank with the power to borrow as soon as possible, a significant shift towards green taxation, the implementation of a comprehensive skills strategy, maintaining public expenditure on R&D, greening public procurement and further reform of the planning system.

(c) A New Approach
— Three priorities for the implementation of a new approach that will be required to deliver a green economy are:
   (i) Implementing fully environmental costs and benefits into decision making;
   (ii) Enduring political and regulatory interventions to drive jobs and growth; and
   (iii) Streamlining domestic carbon prices and programmes to provide clearer signals and reduce complexity.

(d) Enabling the Transition to a Green Economy (ETGE)
— ETGE provides a coherent vision for a green economy.
— However, there are no new policy announcements despite the fact that this will be essential to turn the vision into reality.
— ETGE has been somewhat undermined by a lack of clarity on what it is trying to achieve. It is a useful source of information but will not boost confidence in policy certainty, which is dependent on actions rather than raising awareness of policy.
— Communications should be improved, such as the development of a modern, multi-media website with the latest developments on the green economy and job creation.
— The ultimate test of ETGE is whether its vision for a green economy is driven right from the top of Government with radical new policies to ensure that British businesses pull ahead of international competitors.

(e) Priority Areas and Sectors
— The highest priority for action is the implementation of robust environmental policy across the whole economy. The Government’s vision for a green economy needs to be reflected in all policies across Whitehall with greater recognition of the role of regulation to drive new markets and stimulate innovation.
— The lack of an explicit greening element to the sectoral growth reviews (including advanced manufacturing, ICT, construction and tourism) in the Plan for Growth demonstrates a lack of a joined-up approach.

(f) The Role of Consumers, Businesses, NGOs and International Bodies
— A key responsibility for Government and business is to help consumers make more informed decisions.
— To enable this, there has to be greater transparency and accountability of the environmental impact of an organisation, product and/or service, including the introduction of mandatory carbon reporting.

(g) Best Practice from Abroad
— The UK is losing ground in the green economy race and policy uncertainty is damaging investor confidence.
— It is important to monitor developments abroad to learn from the experience of others and adopt successful green economy strategies. Best practice examples can be found in China, India, United States, South Korea, Germany and elsewhere.

(h) Delivering Globally
— The UK should seek to enhance its strategic exchange programmes with key partners and make sustainable growth a central element of bilateral relations.
— The UK must show leadership at RIO+20 which must ensure greater progress towards a green economy at the global level and governance arrangements are put in place for sustainable development.

AG Response

1. A flatlining UK economy, rising unemployment and dramatic falls in the FTSE have led to renewed calls to accelerate the shift to a green economy. An effective transition will lead to economic value and investment being more secure and less vulnerable to resource price shocks and market speculation. This will boost the economic recovery, create jobs, increase resource security and help make Britain more globally competitive, as well as meeting other government objectives of local regeneration and enhancing high-tech manufacturing. This does not need to be achieved through a major injection of public spending but will require more active government intervention. The Government should implement a comprehensive green growth strategy that will mobilise private capital at scale to invest in green infrastructure and employ a low carbon army to design and develop low carbon systems and retrofit the UK’s homes and businesses.

2. On the 1 March 2011, the AG launched a report entitled “Greening the Economy: A strategy for growth, jobs and success” which sets out what a comprehensive green growth strategy should encompass. The UK is losing momentum in the green economy race and there is only a small window of opportunity to assert leadership in the years ahead. A strong regulatory and fiscal framework will be vital for success, combined with a concerted push to get behind those sectors that have competitive advantages.

Background

3. Greening the Economy argues that how each nation addresses the challenges of a resource constrained world will increasingly determine its future economic competitiveness. Economies must be transformed to provide rising prosperity to citizens, strengthening new growth sectors and modernising traditional sectors. UK policy should focus on three core elements: building a globally competitive green economy, stimulating export growth and attracting inward investment from foreign based firms.

4. Policies to enable the transition to a sustainable economy will generally require investment in the short term to maximise returns in the long term. Not only is the scale of the task enormous and the timetable challenging, but the pressure on public finance is considerable. Nonetheless early mover advantage is essential to drive success and a number of interventions have the potential to raise significant funds for the public purse.

5. The world is engaged in a green economy race and acting early will ensure that the UK is well positioned to attract global investment, stimulating job creation and export growth. While the UK’s economy has strong green foundations on which to build, it is rapidly losing ground to developing nations and other competitors. This trend is directly related to aggressive regulatory and fiscal policy packages that other countries are putting into place, not least China’s new Five Year Plan that seeks to underpin a “clean revolution” in its economic
development and India’s National Action Plan on Climate Change that is projected to stimulate US$1 trillion of investment over the next decade.

6. To lay the foundations for a more resource efficient and competitive economy, the UK needs an intelligent and dynamic policy framework that corrects market failures. Otherwise green investments will flow to more attractive markets or develop at too slow a pace. The most effective policies will provide as much certainty as possible by being:
   - Credible. Legal, enforceable, fully deliverable and supported by an overarching vision.
   - Consistent. Providing confidence that a policy direction will be maintained, implementing progressive, and avoiding retrospective, changes.
   - Bankable. Risk and reward levels are attractive over clear investment timeframes, with no shocks to damage early investors.

(a) Outcomes and Monitoring Progress

7. The Government's vision for a green economy, set out in Enabling the Transition to a Green Economy (ETGE), is that it “will maximise value and growth across the whole economy, while managing natural assets sustainably”.21 This will entail decoupling growth and environmental impacts while maintaining the global competitiveness of UK industry. It envisages using natural resources more efficiently through optimal production processes and waste minimisation, increasing energy and resource security, and exploiting comparative advantages for UK industry.

8. The AG has consistently promoted policies aimed at “the whole economy”. Building a more competitive economy is not just a question of establishing a flourishing low carbon and environmental goods and services (LCEGS) sector. It is also concerned with modernising the entire economy and transforming conventional business models. As such, the AG welcomes ETGE’s broad definition and outcomes. However, the Government should go further. There is no explicit reference to the commitment made in the Natural Environment White Paper to “put natural capital at the centre of economic thinking economic thinking and at the heart of the way we measure economic progress nationally”.22 There is also no mention of the impact on employment and skills, despite the requirement for a green economy to facilitate a smooth and just reallocation of jobs.

9. The Government’s vision for a green economy in ETGE does not include any reference to the social aspects of sustainable development. This is not consistent with emerging international perspectives, particularly from developing countries. The AG recommends that the concept for a green economy in ETGE is more consistent with Defra’s definition for a “sustainable economy” which is “building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentivised.”

10. There is no reference in ETGE to the appropriate tools and indicators to monitor progress towards a green economy. However, a measurable benchmark in the Plan for Growth which was published alongside the 2011 Budget, is “increased investment in low carbon technologies” to meet the Government’s ambitions to encourage investment and exports as a route to a more balanced economy. This narrow indicator does not capture the Government’s broad definition for a green economy that is set out in ETGE. In terms of low carbon technologies, the target of “increased investment” is lacking in ambition. Almost every country in the G20 increased its investment in clean energy in 2010 and this trend is forecast to continue over the next decade. It is welcome that the Government is also committed “to benchmark the UK against the top countries in the world” as this is a relative measure rather than an absolute target. It should also seek to go “beyond carbon” by encompassing the whole environmental sector.

11. The AG would support a broad set of indicators to benchmark a green economy, as set out by the OECD in Towards Green Growth:

“Indicators that measure the ‘green economy’ need to be interpreted carefully. J udged simply by the size of industries involved in the production of environmental goods and services, today’s ‘green economy’ is relatively small. However, economic opportunities, entrepreneurship and innovation in conjunction with green growth can arise in all sectors so an assessment based on green industries understates the economic importance of environmentally-related activities...”.

Monitoring progress towards green growth should draw on groups of indicators which describe and track changes in: (i) productivity in the use of environmental assets and natural resources; (ii) the natural asset base; (iii) the environmental dimensions of quality of life; (iv) policy responses and economic opportunities”.23

12. As indicators are developed to measure progress towards a green economy, the AG would not support including the number of “green jobs” as a benchmark. There are political advantages in claiming that, for example, the UK can expect 100,000 new green jobs by 2015,24 but the previous government classification

for a “green job” was ill-defined and unhelpfully broad.\(^{25}\) In any event the whole notion of “new green jobs” fails to take account of the fact that the Government’s ambition is to transform the whole economy so that, over time, almost every occupation could be described as “green”. The AG believes that there is little advantage in arguing whether a particular job is “green”; the aim should be to accomplish a transition that brings widespread economic and social benefits.

(b) Barriers

13. There are a number of market or system failures that are holding back the transition to a green economy. The Government must examine fully the barriers to growth and set out what it will do to address these in a way that is credible, consistent and bankable. While each sector will face its own particular set of barriers that need to be addressed, the most common barriers across the economy are as follows:

- Prices;
- Finance;
- Taxation;
- Skills;
- Innovation;
- Procurement; and
- Planning

Pricing Externalities

14. Current prices are a long way off providing a sufficient incentive for investments at the pace and scale required to meet environmental challenges. This can most clearly be illustrated by the inadequacy of current policy to create a sufficiently stable, high and credible carbon price, primarily through the EU ETS. There should be a continued push to reform the EU ETS such that it can provide a stable and predictable price at an appropriate level, thereby making a UK-only carbon price support mechanism redundant.

15. In the absence of effective reform at the European level, the AG supports the government objective to introduce a carbon floor price to provide more stability to domestic carbon prices. Further consideration needs to be given to provide greater investor certainty in the trajectory of the floor price, especially as it rises to 2020 and beyond. One option would be to distance the price from government control by giving the Committee on Climate Change the power to set the floor price, according to progress towards meeting the statutory carbon budgets, in a similar way to the process by which the Monetary Policy Committee sets interest rates. Another mechanism would be if the carbon floor price commitment was embedded with a contractual obligation.\(^ {26}\)

16. There is also significant scope for carbon prices to be streamlined across the regulatory framework to reduce complexity and perverse incentives (see point 34).

17. The current policy framework to drive carbon prices may be developing (with much more focus required in terms of lifecycle emissions), but we have only started to scratch the surface in terms of accurately pricing other resources. In a world where the efficiency of resource use matters more and more, this is critical. The AG’s Beyond Carbon report notes that there are significant political and economic difficulties in pricing externalities even when we think we understand them, but that there are also many externalities which are poorly understood. A major international research effort on the economics of ecosystems and biodiversity (TEEB) draws attention to the long-term costs and benefits of ecological systems but we are a long way from being able to calculate or allocate the external costs accurately.

Finance

18. The shift to a green economy generally involves higher upfront capital costs and lower operating costs. Following the credit crunch, capital and private equity investment in environmental sectors has fallen dramatically and long-term finance remains scarce. The funding gap between business-as-usual and what is required to meet environmental targets is becoming ever more stark, with Ernst & Young estimating that the UK funding gap for low carbon technologies alone to 2025 is approximately £330–£360 billion.\(^ {28}\)
19. To address this immense financing challenge, the UK must seek to reduce risks and mobilise finance at scale from institutional investors. The government commitment to create a Green Investment Bank (GIB) is welcome and the institution must be designed to make a transformational impact. In the global green economy race, there will be competitive advantage for the countries that are able to cut the costs of capital. For example, KfW in Germany has a long track record with many decades’ head start. It provided €19.8bn of investment in environmental technologies in 2009—up 12.5% on the previous year.29

20. The Government published an Update on Design of the GIB in May with significant developments regarding the institution’s structure, mandate, operational independence and priority sectors. However, for the institution to address the significant financing gaps for green technologies effectively and be at the heart of the Government’s growth strategy, it must have the ability to raise funds from capital markets as soon as possible. A fully independent, accountable and enduring institution must be established in statute in 2012–03 with a clear low carbon investment mandate.

Taxation

21. A strong driver for the transition to a sustainable economy is a green tax shift, reducing taxes on income and increasing taxes on pollution. An extensive research project by the Green Fiscal Commission demonstrates that this will be vital to put the UK on a sustainable trajectory; help develop the new industries that will provide competitive advantage for the UK in the future; and contribute to restoring UK fiscal stability after the recession.30

22. Greening the Economy recommended that the 2011 Budget should be the first to set out a clear framework for a far-reaching green tax shift. While this was not undertaken, the Chancellor did reaffirm that “green taxes will increase as a proportion of our total tax revenues, as we promised”. However, greater ambition is required. For example, the Liberal Democrats’ 2010 party conference passed a motion calling for the share of receipts for a far-reaching green tax shift. While this was not undertaken, the Chancellor did reaffirm that “green taxes will increase as a proportion of our total tax revenues, as we promised”. However, greater ambition is required.

Skills

23. A crucial component of the transition a green economy is the development of new skills. This includes skills in rapidly growing environmental markets (with requirements for those with a good core education and knowledge in science, technology, engineering and maths), building on existing skills and developing the “new” skills that will be required in all sectors and businesses (such as project management and communication skills). Strong evidence suggests that the UK does not have the necessary skills to make the transition at the pace required, or the training arrangements in place to fill the gap.

24. The measures for “building the right skills” in ETGE, including a “skills for a green economy” grouping of Sector Skills Councils, are welcome. However, there is no explicit strategy to prioritise the skill needs to drive the transition to a green economy. The Government cannot rely on the market to respond to environmental targets at the required scale and urgency, and it is vital that all major environmental policies, such as the Green Deal and renewable incentives, are accompanied by a corresponding skills strategy. An extensive research project by the International Labour Office and Cedefop urges Europe’s policy-makers to ensure that their support for skills and training matches the focus and ambition of their strategies for promoting investment in green innovation and infrastructure. It finds that France is the most advanced in this respect with the publication of a mobilisation plan for green jobs. Government funding for up to 1,000 Green Deal apprenticeships in March is a positive development but this programme needs to be expanded in order to meet the Government ambitions for 100,000 new jobs in home refurbishment by 2015.

Innovation

25. The competitive advantage of the UK in the green economy will depend on companies commercialising innovative goods and services and adopting novel resource efficient practices. Greening the Economy recommended, in line with Committee on Climate Change, that current levels of public expenditure for R&D in environmental sectors should be regarded as a minimum and any cuts would be detrimental to the achievement of the UK’s green ambitions. No significant budget cuts were announced in the 2011 Budget. However, the AG is concerned that the impact of the grant reduction for the Carbon Trust (such as 40% for 2011–12) will constrain its support for low carbon technology development and R&D.

Procurement

26. One of the most direct ways that Government could stimulate demand for more sustainable goods and services is by exemplary action as the UK’s largest purchaser. It is therefore welcome that the Plan for Growth states that the Government will seek to leverage “the £236 billion public procurement power to help drive new markets in green products and services”. However, there is a significant disconnect between this objective and a policy environment where the short-term, lowest cost solution dominates. Further clarification is required on how the Government seeks to achieve its aim. To date, green public procurement has been a relatively low...
priority. Practices such as Forward Commitment Procurement (FCP) need to become mainstream and objectives in this area will only be achievable if civil servants have the relevant skills and in-house expertise by providing more extensive training, real opportunities in terms of career progression and strengthening links between the public and private sectors through secondments.

27. There also needs to be a change in mindset away from setting minimum sustainability standards that leads to incremental change, towards stimulating innovation in new goods and services. This will include greater emphasis on environmental and social measures and making these the basis for competition amongst suppliers—alongside price and quality—rather than a process which encourages a “lowest common denominator” approach. The Government should also challenge suppliers in certain areas to come up with closed loop solutions by a defined year.

Planning

28. In the 2011 Budget, the Chancellor announced that the Government will “introduce a new presumption in favour of sustainable development, so that the default answer to development is yes”. The presumption is not, however, linked to an integrated vision of sustainable development that seeks to integrate environmental, social and economic objectives. Instead, in a radical departure from existing planning policy, the need to support economic growth is given clear primacy over social and economic objectives, as the purpose of the planning system. If the planning system is to continue operating in the wider interests of the public, it must not allow short-term economic growth to be at the long-term expense of the environment, society and ultimately the economy itself.

29. The draft National Planning Policy Framework (NPPF) states that the purpose of the planning system is to “contribute to the achievement of sustainable development”. This is weaker than the previous commitment, set out in PPS1, which insisted that “development plans should ensure that sustainable development is pursued in an integrated manner, in line with the principles for sustainable development set out in the UK [Sustainable Development] Strategy.” The draft NPPF makes no mention of these principles and does not recognise the need to respect environmental limits.32

30. The NPPF must also do more to ensure the delivery of low-carbon and renewable energy infrastructure. Despite a continuing emphasis in the draft NPPF on the need to plan positively for the economy and housing, the language used for low-carbon and renewable energy provision is comparatively weak. Either the NPPF needs to contain spatially explicit and prescriptive policies that local authorities must adhere to, or local authorities must be required to allocate sites for low-carbon and renewable energy infrastructure—based on robust evidence of potential capacity. Such evidence studies should be carried out jointly between neighbouring authorities and should follow the DECC methodology for renewable and low carbon capacity assessment.

(c) A New Approach

31. Three priorities for the implementation of a new approach that will be required to deliver a green economy are:

(i) Implementing fully environmental costs and benefits into decision making;
(ii) Enduring political and regulatory interventions to drive jobs and growth; and
(iii) Streamlining domestic carbon prices and programmes to provide clearer signals and reduce complexity.

(i) Full environmental costs and benefits

32. One of the biggest challenges in greening the economy is incorporating fully environmental costs and benefits into mainstream political and economic decision making. There must also be a realisation that pricing alone remains a blunt instrument and good resource management requires a combination of price, regulation and information to drive behaviour change. A fter these factors have been incorporated, there is rarely a tension between economic growth and the green economy.

33. The limitations of current economic modelling is reflected in a recent paper written for LSE by Lord Stern and others on the basic economics of low carbon growth in the UK. It states that:

“It is important to understand what the full, dynamic economic costs, benefits and risks (including those of alternative paths) of the transition to low-carbon growth are likely to be for the UK. This means recognising the shortcomings and limitations of some of the existing economic analyses based on narrow general equilibrium modelling, or on models that take a limited view of the nature of innovation and learning, and which do not account appropriately for the range of benefits and costs associated with low-carbon investment. Such analyses and models, which are sometimes used within government departments, are not an adequate basis for decision-making.

In particular, much of the more simplistic general equilibrium modelling does not usually reflect four fundamental aspects of the policy problem. These are: the value of emission reductions; the potential for

32 The NPPF also uses “sustainable development” and “sustainable economic growth” interchangeably. This will cause confuse when implementing the planning system as the two terms are not the same.
(ii) Enduring political and regulatory interventions to drive jobs and growth

34. The transition to a green economy will require government intervention. At the heart of economic policy must be the recognition that environmental damage is a market failure and prices need to be corrected to provide the right signals and ensure they reflect the true cost to society. Effective regulation has a vital role to play in correcting market failures and driving innovation, providing the foundations for long-term economic growth, jobs and competitiveness. This is despite the fact that the Coalition Government is committed to reducing the cost and volume of regulation on the economy and has introduced a number of measures to achieve this, such as the introduction of a “one-in, one-out” rule.

35. To secure the growth and jobs of the future, the UK requires a systematic and transparent prioritisation of support for specific sectors with competitive advantages. A recent report by Demos demonstrates that none of the recent technological revolutions happened without the leading role of the state. It finds that:

“The role of the government, in the most successful economies, has gone way beyond creating the right infrastructure and setting the rules. It is a leading agent in achieving the type of innovative breakthroughs that allow companies, and economies, to grow, not just by creating the “conditions” that enable innovation. Rather the state can proactively create strategy around a new high growth area before the potential is understood by the business community...

From the development of aviation, nuclear energy, computers, the internet, the biotechnology revolution, nanotechnology and even now in green technology, it is, and has been, the state not the private sector that has kick-started and developed the engine of growth, because of its willingness to take risk in areas where the private sector has been too risk-averse. In a policy environment where the frontiers of the state are now being deliberately rolled back, that process needs more than ever to be understood so that it can successfully be replicated. Otherwise we miss an opportunity to build greater prosperity in the future”.34

(iii) Streamlining carbon legislation

36. A key recommendation from the OECD’s 2011 Economic Survey of the UK is that “domestic carbon pricing policies need to be harmonised and streamlined in terms of programmes and prices.” This is vital for the Government to meet its commitment in ETGE “to ensure that the system of environmental regulation is effective, proportionate, coherent, clear and implemented in a way that minimises burdens on businesses, in line with the principles of better regulation”.

37. The climate change and energy policy landscape includes what are effectively two taxes charged on the energy used in business, the CRC and Climate Change Levy (CCL), and the Government recently consulted on the introduction of mandatory carbon reporting (which the AG supports). There is significant scope to streamline these regulations whilst maintaining revenues for HM Treasury and driving further carbon reductions. The Government should seek to harmonise carbon and energy reporting obligations in a single, mandatory reporting framework (that could be used to compile an annual public league table), which is transparent and consistent with international reporting requirements. This case has been supported recently by the CBI, Corporate Leaders Group on Climate Change and Policy Exchange.

(d) Enabling the Transition to a Green Economy (ETGE)

38. The AG’s Greening the Economy report sets out the policy and institutional framework required to create the right conditions for the green economy to thrive. A strong regulatory and fiscal framework will be vital for success, combined with a concerted push to get behind those sectors that have competitive advantages.

39. ETGE is a step in the right direction and provides a clear vision for a green economy. The suite of reports provides a suitable foundation on which the Government can rebuild a tarnished image of striving towards being the greenest ever. The content is broad and coherent and explains why acting early would be good for business, good for the economy and good for the planet. As the title suggest, the emphasis is on “government and business working together” and it was informed by open and frank dialogue with the business community.

40. The AG’s Greening the Economy report demonstrates that policy development is required across the board for a comprehensive green growth strategy to be a success, including robust regulation, fiscal measures, enabling innovation, building new skills and greening public procurement. It is encouraging that all these areas are reflected in ETGE and this provides a suitable framework for further action. However, it does not go far enough. Above all, there are no new policy announcements despite the fact that this will be essential to turn the vision into reality.

33 Mattea Romani, Nicholas Stern and Dimitri Zenghelis (June 2011) The basic economics of low-carbon growth in the UK.
34 Demos (June 2011) The Entrepreneurial State.
41. To some extent, ETGE has been undermined by a lack of clarity on what it is trying to achieve. If its main objective is to provide greater intelligibility to business on the green economy and environmental policy landscape, it can be seen as a useful source of information, with the policy timetable being particularly helpful. However, it should be noted that the Carbon Plan also provides some of this clarity (for carbon related issues only). If its main objective is to inspire businesses and help drive collaboration, there needs to be considerable development in its communication strategy. It is welcome that the bulk of ETGE is published online but a more modern, functional, multi-media platform with live updates on the latest developments on the green economy and job creation would be preferable to a somewhat stale and generic government website.

42. ETGE should be regarded as a failure if its main objective is to increase policy certainty and drive investment in the green economy. To enable green growth, actions speak louder than words. What matters is the effectiveness and ambition of environmental policies rather than raising awareness about them. Much more can be done to increase policy certainty, such as designing policies that transcend the political cycle (for example, through contractual obligations). As set out in Greening the Economy, business confidence is severely undermined by sudden or retrospective changes to policies (such as recent adjustments to the CRC recycling mechanism and Feed-in Tariff levels). This is reinforced by the CBI which states that “while some changes are necessary to ensure the right investment signals, this must be balanced against the uncertainty caused by continual adjustments to the policy mechanisms. The latter can be seriously damaging to confidence across the investment chain, making access to finance difficult in some circumstances”.35

43. It was disappointing that ETGE was launched with no media activity and there was no endorsement from No.10 or HM Treasury. This is despite the fact that joined-up government is a prerequisite for success and ETGE addresses “the whole economy”. For example, if procurement and business initiatives are to succeed, the Government must set market signals in all that it does and not just from the departments who are directly tasked with green policy making. The ultimate test of ETGE is whether its vision for a green economy becomes mainstream and there is shared responsibility for action by all departments. It must be driven right from the top of Government with radical new policies to ensure that British businesses pull ahead of international competitors.

(e) Priority Areas and Dynamic Sectors

44. The highest priority for action is the implementation of robust environmental policy across the whole economy. The Government’s vision for a green economy needs to be reflected in all policies across Whitehall with greater recognition of the role of regulation to drive new markets and stimulate innovation. There is an increasing disparity between long-term environmental ambitions and the policies and programmes required to meet them, leading to the Committee on Climate Change, for example, to repeatedly call for a “step change”36 to address the gap. Furthermore, a number of major policy announcements, such as the Plan for Growth and introduction of enterprise zones, could incorporate a major greening element without significantly changing the overall policy direction or costs.

45. The most effective way to stimulate green investment is on a sectoral basis due to the large number of specific barriers and solutions that each sector faces. This will be crucial to deliver the Prime Minister’s vision for a new economic dynamism that seeks to create the right framework for business investment. It will drive growth in those industries where Britain enjoys competitive advantages, making it easier for new companies and innovation to flourish.

46. The lack of an explicit greening element to the sectoral growth reviews in the Plan for Growth demonstrates a lack of a joined-up approach to accelerate the transition to a sustainable economy. For example, the Government could have provided incentives to promote innovation for green technologies in advanced manufacturing, strong policy frameworks to drive demand for green ICT in the digital and creative industries, adopt a number of recommendations from the IGT report by Paul Morrell to drive opportunities in low carbon construction and instigate measures to incentivise eco-tourism (the fastest-growing area of the tourism industry with an estimated increase of global spending of 20% annually).37 The Government should address how each of the growth sectors can address environmental challenges to drive UK competitive advantage and ensure that future sectoral growth reviews adopt a greening element from the outset.

47. The Government must also ensure that future growth reviews focus both on sectors that must play a leading role in the transition to a sustainable economy (such as automotive, aerospace, the built environment and farming) and the LCEGS sector (such as offshore wind, CCS, wave and tidal technologies and water treatment). It is therefore welcome that ETGE published three case studies highlighting how the chemicals, food and drink and automotive sectors are responding to the issues of moving to a green economy. This needs to be developed into an action plan to drive green growth in these sectors and be broadened to include additional sectors. In the LCEGS sector, demand-side policy must be matched by the development of the supply side. For offshore wind, this includes the explicit development of UK-based engineering and construction capacity. A failure to do this effectively over the past decade has meant that only 10–20% of the investment for recent UK offshore wind projects (such as the London Array and Thanet) has gone to British based firms. It is envisaged that benefits for UK firms will be increased through a recent package of measures, such as the commitment

36 Committee on Climate Change (June 2011) Meeting Carbon Budgets: 3rd Progress Report to Parliament.
37 Ibid.
for public investment in port infrastructure in the 2010 Spending Review, that has been rewarded by a number of turbine manufacturers committing to a UK presence (such as Siemens, M itsubishi and GE).

(f) The Role of Consumers, Businesses, NGOs and International Bodies

48. The Ministerial foreword to ETGE notes “that a green economy will only be achieved through working together—through concerted action across Government, but also through Government working together with businesses and with civil society”. There is a shared responsibility to take action. The potential role for business is set out on page 11 and includes investing in greener products, services and production processes; becoming increasingly resource efficient and building resource risks into future business planning; exploring business models which reduce use of resources and carbon emissions; and help articulate demand of future skill needs.

49. A key responsibility for Government and business is to help consumers make more informed decisions. To enable this, there has to be greater transparency and accountability of the environmental impact of an organisation, product and/or service. Regulation has an important role to play, such as the introduction of mandatory carbon reporting that will help create a level playing field and ensure companies report their carbon emissions in their annual report, open to stakeholder and media scrutiny. There must also be greater accountability of lifecycle emissions at the national, company and product level. Analysis by the Carbon Trust demonstrates that the UK is a significant net importer of emissions embodied in trade, and this drives a 34% difference between production and consumption views of UK emissions “responsibility”.38

(g) Best Practice from Abroad

50. Green growth is directly related to aggressive regulatory and fiscal policy packages that countries are putting into place around the world. The market in 2011 is fiercely competitive as businesses strive to achieve first-mover advantages. In the words of Barack Obama: “nobody in this race is standing still”. The UK must ensure it has the right policy framework in place to deliver growth, innovation and decent jobs in the markets of the future.

51. HSBC predicts that the share of the three largest industrialised low carbon markets (EU, USA and Japan) will fall from 60% in 2009 to 53% in 2020, while the share of the three leading major emerging markets (China, India and Brazil) will grow from 25% to 34%. Its research also suggests that the market will primarily be driven by energy efficiency themes, notably low carbon vehicles such as plug-in hybrid and full electric vehicles that will surpass low carbon power as the major investment opportunity.44

52. The UK is losing ground in the green economy race and policy uncertainty is damaging investor confidence. A report published by the Pew Charitable Trusts finds that clean technology investment plummeted in the UK in 2010 relative to competitors. After achieving a fifth-place ranking in 2009, it finds that the UK dropped out of the top ten in 2010 due to “a high level of uncertainty about the direction of clean energy policymaking in the country”.45 Similarly, a report by UNEP on global trends in renewable investments finds that investment in the UK fell by 73% to $2.9 billion due to “policy uncertainty” and changes to the feed-in tariff for PV.45

53. It is important to monitor developments abroad to learn from the experience of others and adopt successful green economy strategies. However, the challenges and opportunities will vary depending on the context of each individual nation.

54. China. Driven by significant public spending, R&D investment, ambitious targets (such as the pledge to lower carbon intensity by 40–45% from 2005 levels by 2020 under the Cancún Agreements of December 2010) and strong incentives and regulatory levers, China has transformed itself over the past two decades to a major manufacturer of a number of low carbon technologies.42 The new Five Year Plan (2011–15) seeks to underpin a “clean revolution” in China’s economic development over the next decade. By speeding up the cultivation and development of emerging strategic industries (including energy saving and environmental protection),43 it aims to restructure China’s economy and reshape its industry, improving R&D in science and technology, and establishing a resource efficient and environmentally friendly society.44 Ernst & Young’s analysis of the relative attractiveness of countries for renewable energy investments demonstrates that “a new world order is emerging in the cleantech sector with China now the clear leader in the global renewables market”.45 The research finds that manufacturers in the West need to be particularly innovative if they are to preserve their share of the market, and are likely to need a greater proportion of Asian product to remain cost competitive.

55. United States. A mixed policy framework (for instance, with no federal carbon policy and a patchwork of state renewable energy standards,) means that the United States has a comparatively weak clean energy

38 http://www.carbontrust.co.uk/policy-legislation/international-carbon-flows/global-flows/pages/uk.aspx#7
39 HSBC (September 2010) Sizing the Climate Economy
40 Pew Charitable Trusts (March 2011) Whose Winning the Clean Energy Race?
43 The new “Magic 7” industries are energy-saving and environmental protection; next generation information technology; biotechnology; high-end manufacturing; new energy; new materials and clean-energy vehicles.
sector given the relative size of its overall economy. However, with significant natural and intellectual resources and a strong culture of entrepreneurship, a strengthened policy framework could enable the United States to regain a leadership role in the coming years. Around $100 billion of the US’s economic recovery package was earmarked for investment in environmental technologies, including advanced batteries, plug-in cars, and a smart grid. In the next few years, it aims to make 40% of the world’s advanced batteries (currently 2% market share) and 10% of the world’s solar panels (currently 5% market share).

56. India. It is estimated that low carbon initiatives in India could result in investments of over US$1 trillion over the next decade through the implementation of the National Action Plan on Climate Change. This package aims to promote energy efficiency (including targets for energy efficiency in large energy-consuming industries and the introduction of a trading system for energy-savings certificates), investments in renewable technologies (particularly wind and solar), sustainable buildings, water efficiency, sustaining the Himalayan ecosystem and reforestation. It has been estimated that the Government’s plans to increase industrial and village-level biofuel production has the potential to create ten million jobs across the country.

57. South Korea. The five-year “green growth” strategy contains policy goals and targets to tackle climate change and enhance energy security, create new engines of growth through investment in environmental sectors, and develop ecological infrastructure. The commitment to spend 2% of GDP on green investments (such as renewable energies, sustainable transport, green buildings, and ecosystem restoration) is a significant effort to reorient and refocus spending on the environment. It aims to increase Korea’s share of clean tech exports from 2% to 8% of the world total by 2012.

58. Germany. The German Government has acknowledged the need to develop strategic industrial policy that will further both Germany’s economic interests and environmental goals. It specifically aims to strengthen strategic industries of the future, promote innovation, adapt the industrial structure of the economy to ever-scarcer resources and switch the material base of industry in important fields to renewable resources. Through its leadership over the last few decades, Germany has already generated 280,000 jobs in the renewable sector and strong growth is forecast. By 2020, the environmental sector is predicted to increase to €500 billion from the current level of €220 billion and create one million new jobs.

(h) Delivering Globally

59. The A G supports the government commitment in ETGE to “promote international action to develop a green economy, including through global agreements, EU strategies, and other initiatives, and working through the G20 and other forums to encourage green growth”.

60. The UK should seek to enhance its strategic exchange programmes with key partners and make sustainable growth a central element of bilateral relations. The World Resources Institute, for example, demonstrates that the success of Japanese and German companies in the wind and power sectors indicates that through joint venture, licensing, or joint design, foreign technology providers can benefit from the financial resources, manufacturing capacity, and enormous market of many emerging economies. As such, the Prime Minister’s commitment to promote British commerce and put international trade at the heart of the UK’s foreign and economic policy is welcome. This was recently illustrated by agreements with Chinese and Indian political and business leaders on low carbon initiatives and exchange programmes. National impetus for greater innovation must also be supported at the European level.

61. RIO+20 is an important opportunity to ensure greater progress towards a green economy at the global level and governance arrangements are put in place for sustainable development. The UK must show leadership and champion success stories such as the Climate Change Act, Green Investment Bank and National Ecosystem Assessment that will accelerate the transition to a green economy. The Prime Minister should attend the conference alongside finance, development and environment Ministers.

1 September 2011

46 Few Environment Group (April 2010) Who’s Winning the Clean Energy Race?
47 The White House (26 May 2010) Remarks by the President on the Economy.
48 UK-India Business Climate Group (November 2010) UK—India Collaboration for a Prosperous Low Carbon Economy: Opportunities, Challenges and Recommendations.
52 World Resources Institute (October 2010) Scaling Up Low-carbon Technology Deployment: Lessons from China.
53 Number 10 (25 October 2010) PM’s speech on creating a “new economic dynamism”.


Supplementary written evidence submitted by the Aldersgate Group

I am writing in response to your request for further information on any policies or commitments from Enabling the Transition that were weakened or omitted during the process.

From my recollection as a member of the sounding board, it was clear from the outset that Enabling the Transition would not include any major new policy commitments despite these being fundamental to turn the Government's vision for a green economy into reality. While original drafts were much longer in content, I do not believe that there were significant omissions in the final draft.

I am of the view that the policy process suffered from a lack of ambition from the start rather than being weakened at the end. Now that Enabling the Transition has been published, it must be accompanied by a comprehensive green growth strategy that builds on the Government's green economy framework and drives UK growth, jobs and competitiveness. The Green Economy Council should have a central role in helping to formulate and deliver such a strategy.

In response to my recommendation to improve the communication strategy of Enabling the Transition, the Chair asked me what the document should have been called and I said that I would write back to the Committee with a suggestion. I made the point that the Government should publish a modern, multimedia website that has the potential to reach new audiences in a similar way to the website for the stimulus package in the United States (www.recovery.gov). The website could simply be called "The New Economy" with the latest developments on news, learning and job opportunities.

I also referenced the green skills consultation that was launched by the previous Government, entitled Meeting the Low Carbon Skills Challenge (31 March 2010). For your information, I have enclosed both the consultation document and the Aldersgate Group response. To my knowledge, there is no longer a Government official with lead responsibility for green skills following the recent retirement of Jonathan Mackey (the former Assistant Director, Sector Skills, Skills Directorate at BIS) and the lack of a Government strategy and expertise in this area is a major barrier to the development of a successful green economy.

28 September 2011

Written evidence submitted by the Environmental Industries Commission

1. The Environmental Industries Commission (EIC) was launched in 1995 to give the UK’s environmental technology and services (ETS) industry a strong and effective interface with Government. With 230 Member companies EIC has grown to be the largest trade association for the ETS sector in Europe, and enjoys the support of leading politicians from all three major parties, as well as industrialists, green NGOs, environmentalists and academics.

2. The EIC and its Members work to provide solutions that meet or surpass the environmental standards set by Government legislation, and work in partnership with government to strengthen the UK’s environmental policy framework. This helps ensure that the Government’s stated intentions to put environmental protection at the heart of its plans for economic growth are realised. In practice, this framework ensures that the Government’s environmental targets are met or exceeded, ensuring that the UK and its citizens enjoy measurably cleaner air, water and land.

3. Overall, the UK’s environmental industry (on BIS’s 2009–10 figures) has a turnover of £112 billion. It exports some £10 billion. Total employment in the UK’s environmental industry now exceeds 900,000 jobs. This all feeds into a £3.2 trillion global environmental marketplace—there is no reason why the UK can not lead this marketplace. These are not insignificant figures, and we welcome the Government’s stated determination, and the Committee’s inquiry, into how to seize this commercial opportunity.

4. The EIC has welcomed David Cameron’s comments about the business opportunities for British companies within the Green Economy. However, there has been increasing frustration within the ETS industry at the lack of detail, and engagement of Ministers, to address certain concerns of the industry which would help and accelerate green jobs, innovation, investment and accelerate growth in the green economy. We have been at the forefront of the Green Economy for over 15 years and have had many successes in this time in influencing the environmental policy regime. Our Members are at the core of the Green Economy—the reality behind the rhetoric, providing environmental solutions to all sectors of British industry. The multi-faceted environmental challenges facing us will impact across the whole economy—the green agenda is an all-encompassing one.

5. We recognise the challenges of the national debt that government departments have had to address, but we also challenge the Government to see the Green Economy as an investment, not a cost. The Government has the opportunity to drive a new green economy in the UK, exploiting the £3 trillion export market in the process. The Coalition’s agreed “Programme for Government” speaks of the need to “promote the green industries that are so essential for our future”, and sets the ambitious aim of being the “greenest government ever”. The Coalition Government need to realise that every pound spent on a supportive policy for the environmental industry will see many more in return through investment, innovation, and new green jobs. We look forward to working in close partnership with the Government, and the Environmental Audit Committee, to accelerate this transition to a Green Economy.
6. To see this happen successfully, the Coalition Government’s commitment to green growth now needs to be followed up with policy actions. Only a strong policy framework will see our environment protected and the vast commercial opportunities exploited (see annex for a more details). This is where EIC has such an important role to play—we have lobbied harder than any other organisation for the domestic environmental policy framework that would secure this huge economic opportunity for the UK.

7. In 2009, George Osborne highlighted the need to “bring to an end the stale argument that we have to choose between economic growth and the environment.” This was a welcome commitment and must now become the foundation of all future Treasury policy. The range of environmental challenges we face are a product of the greatest and widest-ranging market failure ever seen. When we emit greenhouse gases, or our vehicles emit harmful air pollutants, or our factories discharge harmful toxins to our rivers and seas, the market does not bear the true cost of the damage caused. The only way to correct this failure is to adopt policies that ensure environmental damage is translated into immediate price signals.

8. EIC believe that the only effective way to do this is through active Government intervention in the economy, by providing a strong policy framework that boosts low carbon and sustainable growth and puts an appropriate price on pollution. This ensures that the Government harnesses the power of markets to find effective, efficient and equitable responses to the environmental challenges we face.

9. If the Government is to provide the confidence businesses need to invest in environmentally friendly goods and services, it needs to put in place a long term, stable and ambitious environmental policy framework covering all sectors of the economy—and across the wide range of environmental challenges. EIC has long been concerned that successive governments have had a narrow understanding of the economic opportunities of environmental protection—by focusing (perhaps unconsciously) on “low carbon” growth and not other, equally important, environmental and sustainability issues.

10. This concern, and lack of investor confidence, is further exacerbated by the Government’s Red Tape Challenge (RTC). EIC believes that the RTC is a potentially major threat to the UK’s environmental industry, which lives and dies by the regulatory framework and for which Government intervention is a vital ingredient in the creation of the environmental markets of the future. To this end, we feel it is unclear as to how creating further policy uncertainty squares with promoting investor confidence in the environmental goods and services, nor with the promotion of green job creation as outlined in the Government’s “Plan for Growth”.

11. The Government’s new Roadmap—“Enabling the Transition to a Green Economy”—is a good starting point, but now we need to see the implementation of a wide range of environmental protection policies that are long-term and stable, if we are to provide the necessary confidence of investors. The Pew Charitable Trusts has reported in their recent document “Whose Winning the Clean Energy Race?” that investment in clean technology in the UK has already seen a dramatic drop. Between 2009-2010 the UK dropped from fifth place in the world, to below the top ten—citing policy uncertainty as a key factor.

12. EIC also believes that there is a need for strategic thinking by Government with the aim of promoting and assisting the whole of the ETS sector. An overall strategic approach to green jobs and skills must address issues related to water pollution, air quality, land contamination and soil quality, and the efficient use of resources. EIC has lobbied at the highest levels for a new Environmental Industrial Strategy that sets out how the Government will support all parts of the environmental sector.

13. EIC’s 2011 Policy Manifesto “Driving Growth and Competitiveness in the UK’s Green Economy” (attached in full as an annex) sets out a series of recommendations for how the Government can become the “greenest ever” and establish a world-leading environmental industry in the UK on a sector-by-sector basis—with thousands of new businesses, hundreds of thousands of new jobs and huge export potential.

14. Whilst we would encourage you to read the full Manifesto, some key actions the Government must take include:
   - Government economists ensuring that their Impact Assessments assess the economic benefits of environmental policies (in particular, the job creation and export potential for the UK’s environmental industry).
   - Targeting fiscal and monetary incentives to facilitate investment in green technologies, including improving and expanding the Enhanced Capital Allowances scheme for energy and water efficiency technologies.
   - Maintaining the Land Remediaion Relief to provide greater incentives for brownfield development.
   - Introducing a National Framework for Brownfield Development with criteria that should be applied when procuring development projects on brownfield land, covering: a) insurance, b) liability, c) testing of soils and waters and d) the competency of persons carrying out remediation.
   - Ensure the forthcoming Water White Paper addresses OFWAT’s regulatory role to prevent the “boom and bust” five-year funding cycle of water companies and ensure sustainability and employment in the supply chain.
   - Bring forward proposals for the Green Investment Bank to have borrowing powers to help facilitate and accelerate private sector investment in environmental innovations.
15. EIC welcomes the publication of the Government's new green economy roadmap—"Enabling the Transition to a Green Economy"—and is supportive of the vision it sets out. It is a useful document in setting a general framework, and timetable, for the transition of the UK’s economy to a resource-efficient, low carbon, sustainable basis—and such a vision should help encourage British businesses to plan ahead to exploit the commercial opportunities open to them.

16. However, whilst the intention is admirable, we remain concerned that there is a lack of the detail required to create a platform for the necessary investor confidence. As the worldwide stock market crisis highlights, investor confidence is crucial. But in order to boost investment and the UK’s international competitiveness, the lack of policy detail within the document is a key concern as it may not produce the levels of investor confidence intended, and it is vital that policies are "bankable".

17. The Government needs to agree a set of key, broad-based, indicators for success—number of green jobs, export rates, uptake of resource efficiency, etc—and milestones along the way, perhaps in the form of interim reports.

18. Additionally, there needs to be a "sponsoring unit" within Whitehall to track this path to success. Whilst there are teams monitoring the implementation of individual policies, there is no group dedicated to, or tasked with, tracking the "bigger picture". Without this, it will be difficult to measure accurately the roadmap’s success.

19. Whilst the Government’s roadmap does make reference to the need for an environmentally-skilled workforce, there is no clear strategy how this will be delivered in practice, particularly at the rate needed to meet the timely delivery of the Government’s environmental policies and targets. We believe it would be helpful if key Government environmental policies such as the Green Deal, for example, were published alongside a corresponding skills strategy to ensure their successful implementation.

20. The range of environmental challenges we face are, as stated earlier, a product of the greatest and widest-ranging market failure ever seen. The only way to correct this failure is to adopt policies that ensure environmental damage is translated into immediate price signals. This will require active Government intervention in the economy by providing a strong policy framework that boosts low carbon and sustainable growth. The roadmap, however, only makes a fleeting reference to flagship policies like the Green Deal, let alone the Waste Strategy and the Water White Paper. And the vital need for long-term policy certainty is undermined, for example, by the recent chopping and changing to the CRC Energy Efficiency Scheme and feed-in tariffs. Put this in the context of the current Red Tape Challenge and the Government’s wider de-regulatory agenda, and the problem is exacerbated.

21. Early drafts of the Roadmap contained some analysis of defined sectors of the economy and how they might be expected to relate to the greening economy, but this has disappointingly been foregone in the published version. Further detailed policy work is required in order to inspire and encourage those sectors facing increased or transforming demand for their products. The Government also has a vested interest here in ensuring British industry is resilient to future environmental changes, and that Britain is protected from future natural resource scarcity. Further policy instruments will be required to smooth volatility and to ease the senescence of outdated sectors.

22. HM Treasury has a key role in this area. However, EIC was disappointed that the “Plan for Growth”, published in tandem with the Budget, whilst breaking down the economy into sectors, did not define the environment or the “greening economy” as one of them. This was a missed opportunity, and one that highlighted a lack of joined-up thinking in the Government’s approach to a sustainable economy. We believe this must be rectified in future growth reviews.

23. One key barrier to investment in the green economy in the water sector, for example, is the regulatory requirement (through Ofwat) that water utility companies recoup R&D investment within the life cycle of the asset management programme (AMP) in which the investment was made. The AMP cycles are five year regulatory periods through which Ofwat control investment in water infrastructure asset repair and development.
and in environmental quality. One facet of the regime is that all benefits derived from any R&D investment made from the regulated revenues must be reconciled within the AMP cycle in which the investment is made. Given the five year AMP periodicity and that any realistic R&D programme may well have a 10–15 time period we face a position in which investment in innovation is heavily curtailed.

24. Whilst EIC is supportive of the “polluter pays” principle, however, we believe it is important that polluters should not simply be punished through fiscal means—Government assistance with positive behavioural change is just as important. For example, if a “green” tax is not set at a high enough rate, large polluters could simply choose to absorb the extra cost into their expenditure whilst continuing “business as usual”—this may be good in the short-term for HM Treasury, but does little to improve the UK’s long-term environmental health nor does it directly support investment into green skills and green jobs.

25. The Government therefore also has an obligation to offer carrots for positive behavioural change amongst polluters, as well as sticks—perhaps in the form of tax incentives to drive the uptake of clean technologies. In this regard, EIC persuaded the previous Government to introduce Enhanced Capital Allowances—and we believe these could be extended further.

26. Such an approach would require leadership, particularly from the Chancellor of the Exchequer. However, EIC feels that, despite some positive words in opposition, this has not yet been turned into reality under the current Government. Despite the Green Economy Roadmap being signed off by the Secretaries of State for three Government departments, neither HM Treasury nor No 10 were among them.

27. There are, however, other mechanisms beyond regulation and taxation that can drive the transition to a green economy—for example, sustainable public procurement and a greening of supply chains.

28. EIC believes that the Government should make a clear commitment to sustainable public procurement, with long-term targets for improving energy and resource efficiency in all Government procurement. The Commission on Environmental Markets and Economic Performance recently highlighted, for example, that “there is a huge opportunity for the public sector to amplify the role of low carbon and other sustainability characteristics in products in their purchasing requirements, creating a credible market need for these features so that business will invest in them to gain competitive advantage”. This is a view we support.

29. To achieve this and therefore drive innovation in the UK environmental industries, EIC believe that the Government should adopt the following mechanisms in all Government procurement:

- The introduction of minimum environmental standards that all companies have to meet in order to win public sector procurement contracts.
- The introduction of lowest whole-life-cost as a metric within procurement, specifically in the buildings, energy and infrastructure sectors.
- Switching from the specification of input-led standards to output criteria and performance with respect to sustainability targets for services, equipment and technology.
- Developing Regional Procurement Networks that register local businesses once they have met procurement criteria allowing them to be pre-qualified for and have direct access to their local tenders—thus promoting local and sustainable business.

30. The pressure that can be brought throughout a supply chain to transform supply and produce a greener product should also not be underestimated. One excellent example of such pressure is the Netherlands CO₂ Performance Ladder [available here in English: http://www.skao.nl/index.php?ID=45]. The ladder provides a framework whereby participants benefit from a premium being applied to tenders of up to 10% should they be at a higher level on the performance ladder compared with a competitor. Begun within the rail sector, the performance ladder is now widely adopted throughout government and municipal procurement and has enabled deep-rooted transformation throughout supply chains in respect of carbon management and reduction. This has spawned investment in new technologies, behavioural change in organisations and substantial cost reductions, and is the sort of approach we would like to see adopted in more detailed follow-up documentation that we hope will follow on from the publication of the current Roadmap.

31. Overall, we welcome the attention the Coalition Government is paying to the green economy and the publication of the Roadmap is an important first step. However, the document as published presents only an overview of the many and complex aspects of the road we need to travel in order to fully green our economy. If we accept that one major challenge is that by 2050 our carbon emissions must be reduced to 80% of those we produced in 1990, then our entire economy will require reshaping and substantive planning is urgently needed to achieve this outcome. We cannot accept that this document represents the sum total of Government’s thinking on these matters, and look forward to immediate further publications and announcements that will show the leadership needed in the UK in order for us to begin to take on the challenges we face and that will inspire our environmental industries to innovate, grow (and export) and meet those same challenges.
32. As previously stated, we have attached as an annex to our response a copy of EIC’s 2011 Policy Manifesto, which goes some way to providing a wider analysis of how the UK can make the transition to a truly green economy, and the policies that are required to get there on a sector-by-sector basis.

2 September 2011

Supplementary written evidence submitted by the Environmental Industries Commission

Further to the Environmental Industries Commission’s oral evidence to the Committee on the 14 September 2011, we received a request for further information and comment, which we are delighted to provide below.

These comments complement EIC’s two written responses to Defra’s Review of Ofwat, which the Committee has had previously.

The Committee would welcome an analysis of the impacts of the current investment cycle in the water sector, and any thoughts or recommendations for improvement.

Regulatory Cycle

Since privatisation of the water industry in England and Wales in 1989, the supply chain has been exercised by the cycle of regulation. Opinion is split as to whether this is an inevitable consequence of the regulatory regime itself or whether it is more due to the water companies’ reaction to it. Similar regimes have recently been established in Scotland and Northern Ireland where the determinations are now set to coincide.

Five year AMP cycles have driven 5 year behaviour. Quality and long term asset life is being eroded by the five year cycle and the lack of investment in long term solutions. Solutions are, more often than not, provided to get through to the end of the AMP and represent the minimum that must be done in order to achieve this. True whole life costing, and indeed carbon costing, are not taken into account in decision making. At a recent straw pole at a British Water meeting only one delegate out of thirty five could say they had implemented a whole life cost solution which had entailed a high capital cost.

Ofwat had taken notice of this cycle and introduced the Early Start Programme (ESP) at the start of AMP4 in an attempt to flatten the profile of expenditure and mitigate its negative impact on the supply chain. The ESP had limited effect and was not repeated for AMP5. More recently, Ofwat has paid little attention to the cycle and its impact and has expected the water companies and their supply chains to manage the situation, thereby failing to recognise that the regulatory regime is the major cause of the cycle and by implication, its impact.

It is implied that if the customer is to receive the “best deal”, then the water companies need to be supported by adequate and efficient supply chains to enable them to deliver their obligations in a timely and sustainable manner. We would like to see the regulator have an express duty of care for the industry supply chain and its wellbeing. This would help to ensure that the customer gets the “best deal” as well as deliver additional benefits to the economy by ensuring that there is a healthy, efficient and sustainable supply chain that is able to fulfil its potential in the international market place.

If five year cycles are to be retained, there is no reason why the water and sewerage cycles cannot be staggered so as to level out the effect of having two cycles running at once.

56 Published separately by the EIC.
Environmental Audit Committee: Evidence

**Table**

WATER COMPANY EXPENDITURE IN ENGLAND AND WALES SINCE PRIVATISATION

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**Impact of Regulatory Cycle**

The AMP cycle has had a profound impact on resources since privatisation. Recent data gathered by British Water shows that the number employed at the start of AMP4 in 2005 is 40% less than at the peak in 2008. A similar number of jobs were lost from the supply chain between the peak of AMP4 and its end in 2010. This would indicate that the cost to be approximately £650 million for AMP4 or £2.6 billion since privatisation and well over £3.25 billion before the end of AMP5 in 2015. This figure does not include hidden costs and intangibles such as the cost to employers of maintaining facilities to accommodate the maximum number of employees rather than the average or the cost to the industry of knowledge and experience lost when people leave during the regular downturns that are a feature of the regulatory cycle and do not return.

There are also other indirect costs such as the cost to the economy of supporting 40,000 extra jobless and the human cost and stress to individuals and families brought about by this process.

The cycle also affects innovation. There is little built into existing regulatory arrangements to encourage innovation and there is no allowance for internal R&D. Innovation is rewarded within an AMP cycle only if a company can out-perform its targets, but not in the following AMP period. This means that innovation only benefits a company in a short term context, irrespective of its longer-term benefits. Long-term investment to improve efficiency is effectively penalised by the shareholder value and the asset-based return element in the financial settlement means that a company can secure a return by adding to its assets. There is no return from innovating, so that new assets are not needed.

EIC’s thoughts on the Government’s consultation with stakeholders prior to the publication of “Enabling the Transition to a Green Economy”, and specifically any policies or commitments put forward that were weakened or omitted during that process:

Early drafts of the Green Economy Roadmap (GER) contained detailed analysis of the implications of the transition to a green economy for various identified sectors of our current economy. The GER also contained policy areas that appear to be missing from the final published version.

The following are examples of policy statements that would indicate significant government support to the environmental industries that appear to be missing or much reduced in scope in the published version. (Bold type included in Government drafts):

“Overly-prescriptive methods of procurement can inhibit the scope for businesses to provide innovative solutions. We will continue to work to improve procurement methodologies, including outcome-based approaches and making it easier for SMEs to supply to Government”.

Whereas the published version of the GER contains a document focussed on SME’s, this is a publication from Business Link and not a ministerial document. It contains little by way of policy and falls short of the commitment of the early GER draft reproduced here:

“There is also scope to improve the sustainability of Government operations. Key areas of action include carbon emissions, waste and water use. We will increase the sustainability of Government operations, as set out in the Greening Government commitments”.

“Ev 108”
Government is a huge procurer of goods and services and can exert significant influence on supply chains and hence significant economic impact in the environmental sector. The above statement extracted from and early draft of the GER gave some recognition of this. The published version makes no mention of government influence through procurement:

"The Government is a significant investor in built infrastructure. The Spending Review set out that Government will prioritise economic infrastructure that supports growth and the transition to a low-carbon economy, taking a long-term approach to value for money. This will create opportunities for businesses who supply this green infrastructure".

The published GER makes mention of the importance on infrastructure to the green economy yet falls short of the prioritisation of infrastructure that supports growth as indicated in this extract from an earlier draft of the GER.

We do hope you find these further comments to be of value to the Committee's inquiry, but would of course be very happy to provide further information as necessary.

19 October 2011

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**Written evidence submitted by Defra, DECC and BIS**

**Introduction/Summary**

1. We welcome the Committee's inquiry into the Green Economy. There are strong arguments for moving to a green economy and taking action now: to avoid burdening our future generations with the costs of early inaction, to help UK businesses take advantage of new markets for environmental goods and services, and to demonstrate the strong stance the UK is taking internationally to reduce carbon and tackle climate change. According to the Stern Review the global costs of climate change could be between 5% and 20% of GDP per annum if we fail to act, dwarfing the costs of effective international action, estimated at around 1% of GDP in 2050. In addition the net costs of mitigation in the short to medium term will be higher if global action is delayed or if there is uncertainty about the investment and changes in behaviour needed to make the transition.

2. This Government has taken strong action to facilitate the transition to a green economy. Initiatives delivered and in the pipeline, such as the Green Investment Bank, Electricity Market Reform, Renewable Heat Incentive, the Green Deal and provisions in the Natural Environment White Paper, are part of a broad programme of work which will drive the transition and ensure the UK is well placed to take the opportunities created and is prepared for the challenges. This is all part of wider work Government is doing to put the UK on a path to sustainable, long-term economic growth.

3. This response highlights the Government's actions and draws on “Enabling the Transition to a Green Economy: Government and business working together” (ETGE), a recent publication which aims to help set out the government’s approach to building the green economy and serves as a tool to inform continuing dialogue between government, business and communities. A full list of publications used to build this response can be found at Annex A.

(a) The economic, social and environmental outcomes that a green economy should aim to deliver, and the appropriate tools and indicators to monitor progress towards such outcomes

4. A green economy is not a sub-set of the economy at large—our whole economy needs to be green. A green economy will maximise value and growth across the whole economy, while managing natural assets sustainably.

5. Our vision is that our green economy of the future will:

   - Grow sustainably and for the long term. Growth in the economy will be achieved and wealth generated while emissions and other negative environmental impacts are reduced. Opportunities for green growth will be facilitated—including in a growing low-carbon and environmental goods and services sector—and the global competitiveness of UK industry maintained.

   - Use natural resources efficiently. Effective demand management and efficiency measures for energy and other resources will be used in our homes, offices and businesses across the economy. Inputs of materials to production processes should be optimised and the level of waste to landfill should decrease through greater resource efficiency in production and a move towards closed loop production through increased recycling, re-use and remanufacture. New process and products will be required, creating new market and job opportunities.

   - Be more resilient. The UK will have a reduced reliance on fossil fuels whilst maintaining secure supplies of energy, food and other natural resources. The economy will be more resilient and prepared for the implications of a greater scarcity of resources, climate change and environmental risks such as floods and heatwaves.

   - Exploit Comparative Advantages—UK businesses will be well placed to take advantage of the expanding markets for greener goods and services.
6. The Government currently publish Sustainable Development indicators which cover sustainable consumption and production, climate change and energy, protection of natural resources and, creation of sustainable communities.

7. We are currently reviewing Sustainable Development Indicators and intend to publish these for public consultation at the end of 2011. In developing these indicators we will consider which measures can provide the best picture of the impact of our production and consumption of goods and services—looking at consumption patterns and resource efficiency of business and individuals as well as the UK as a whole.

8. The OECD have conducted some useful work in developing Green Economy Indicators published earlier in the year,\(^{57}\) this will be a useful resource to draw on for future thinking in this area.

9. We are making significant steps towards developing a green economy, by placing the value of natural capital at the heart of decision-making. The Natural Environment White paper (NEWP) sets out actions Government will take to achieve this, by accounting for natural capital. A significant new commitment is to establish an independent Natural Capital Committee—reporting to the Economic Affairs Cabinet Committee, to provide independent expert advice on the state of English natural capital. Other commitments include working with the Office of National Statistics to fully include natural capital within the UK Environmental Accounts with a roadmap published in 2012 to set out required improvements up to 2020, with early changes to be made by 2013. These accounts will provide a useful tool for understanding the interaction between the economy and the environment, both in terms of the impact that economic activities have on the environment and the use that the economy makes of the environment.

10. The Measuring National Well-being Programme was launched on 25 November 2010 with the long-term vision of an accepted and trusted set of National Statistics, which people turn to first to understand and monitor national well-being. The phrase “national well-being” recognises a need to provide wider measures of progress and quality of life than are derived just from the national economic accounts. This work is sometimes characterised as “GDP and beyond”.

(b) The nature of any barriers preventing the transition to a green economy

11. Government has worked with business to understand the barriers to a green economy transition. More detail on these barriers can be found in ETGE’s “unlocking green growth” annex, but in summary:

   — Appropriateness of infrastructure—this is largely geared towards incumbent technologies, which are predominantly based on the use of fossil fuels.

   — Ability to access finance—there are significant challenges in accessing finance for green investments, such as capital investment in new large infrastructure projects and taking technologies from demonstration to commercialisation.

   — Availability of necessary skills—the transition to a green economy requires a workforce with the right skills. This includes ensuring that the skills are in place to help support the growth of new and emerging low carbon and environmental goods and services sectors as well as those needed to help all businesses use natural resources efficiently and sustainably and to be resilient to climate change.

   — Investment in innovation—risks related to likelihood of success or the potential market size and difficulties in capturing the full value of innovation, particularly given that final markets may be initially stimulated by government policy, affect the incentives to innovate, and hence may lead to underinvestment in innovation for a green economic transition.

   — Information provision—Businesses need information to inform decision making on risk, market opportunities and the impact of their activities. Employees need information on the skills needs, and job opportunities available, in the green economy. And consumers need information on how to change their behaviours and to inform choices. Government needs to both receive and supply information on environmental impacts and performance measures.

   — Wider context—In the absence of international cooperation to mitigate climate change, or if the UK moves quicker than other countries, there could be significant adverse competitiveness effects on some UK industries. That could result in “carbon leakage” as UK industries relocate to other countries. Conversely, though, it will help international negotiations if the UK can show that decarbonising the economy, whilst balancing competitiveness issues can work.

12. There are a broad range of policies in place or under development to address these barriers. For example:

   — Large scale reforms of the electricity market will bring forward the investment needed to decarbonise electricity generation.

   — The Green Investment Bank will leverage investment in infrastructure projects that support growth and environmental objectives.

   — Radical changes to the planning system, including a fast-track planning process for major infrastructure applications, will remove several of the barriers holding back growth and the green transition.

\(^{57}\) OECD: Towards Green Growth: Monitoring Progress—OECD Indicators.
Increased bank lending to businesses, the Business Growth Fund and increasing Enterprise Capital Funds will improve access to finance, particularly for small and medium sized enterprises.

The new National Careers Service, to be launched in April 2012, will improve the quality of information, advice and guidance available on careers in a green economy.

The Low Carbon Innovation Delivery Review (LCIDR) will enhance the delivery of public funding support for innovative low carbon technologies and a new Offshore Renewable Energy Technology Innovation Centre has been announced.

A package of measures will be announced before the end of the year for those energy intensive industries whose international competitiveness will be most affected by our energy and climate policies. This package will help these industries adjust to the transition to a green economy.

(c) The approach required to deliver a green economy, and the aspects of the current economic model that require development, eliminating and/or new approaches found. What tensions might there be between economic growth and the green economy? Would “greening the economy deliver the outcomes needed”?

13. The Government’s Plan for Growth makes clear that decarbonising the economy provides major opportunities for UK businesses. At the last Budget, the Government set out its ambition for increased investment in low-carbon technologies and a commitment to benchmark the UK against the top countries in the world. In 2009–10 the global market for low-carbon and environmental goods and services was estimated to be worth more than £3.2 trillion. The UK share of that market was estimated to be worth around £116 billion. With average annual growth forecast to be 5% to 2016-17, if we act now to build on our situation, UK business can be at the forefront of the transition.

14. Building on the reforms set out in the Plan for Growth there will be a second phase of the Growth Review, as we continue to focus on restoring the economy’s health. The growth reviews will work to capture, where appropriate, actions that will both enhance growth and help to deliver our environmental objectives.

15. It is clear that the UK is becoming increasingly dependent on imported fossil fuels—by 2020 we could be importing 45-60% of our oil and 70% or more of our gas. At the same time, global energy markets face a number of challenges. Demand is likely to increase, potentially leading to supply constraints and volatile prices without timely and massive investment in new production. Access to other critical natural resources such as water and minerals could also be constrained in the future. Global supplies of rare earth elements for example, are dominated by China, where recent export restrictions have led to constrained supplies. The UK needs to become more resilient to such price variations, develop alternative sources of supply, and make more efficient use of natural resources.

16. The Government recognises that there will be increased costs of some resources, and rebalancing of investment and innovation towards green activity. As we make the transition, we will need to take into account the distributional impacts on certain households and sectors, including for example energy intensive industries.

17. A potential significant challenge for energy intensive businesses will be the increased costs as a result of climate change and other environmental policies, and from the increased cost of energy. The government recognises the issues facing these industries, including the difficulties some face in remaining internationally competitive, while driving down domestic greenhouse gas emissions. We are taking active steps to help these industries adjust to the transition (see below) because the green economy will continue to have and need these sectors.

18. There are actions that can deliver both economic and environmental gains in the short-term, such as low cost/no cost energy and resource efficiency measures. Evidence from the Carbon Trust includes a finding that a 35% improvement is possible in the energy efficiency of UK buildings by 2020, and that this would realise over £4bn worth of benefits. Maximising the opportunities and managing the costs of transition to a green economy will require choosing the most efficient mix of interventions where the benefits justify the costs, as well as providing a robust, credible and long-term policy framework to increase business certainty of payback from investment.

19. There are a number of different policy tools and approaches that Government can use to affect this change and it is important to develop an integrated package of interventions if we are to deliver a meaningful effect (see Figure 1 below). As a starting point, getting the policy framework right is essential to facilitate this transition while minimising costs and other negative impacts to businesses. This means outlining, clear long-term objectives, choosing the right policy mechanisms, designing policy to work as efficiently as possible and highlighting where benefits justify costs.

58 The Plan for Growth, March 2011.
Figure 1
“4 ES” MODEL OF BEHAVIOUR CHANGE

Making it easier for businesses and consumers to act (e.g. Ensuring availability and building understanding of green choices)

Enable

Getting businesses, trade associations, civil society and consumers involved (e.g. simplifying regulations, exploring ways to make it easier to make sustainable choices)

Encourage

Demonstrating greener behaviours (e.g. procuring greener products and moving to more sustainable operations)

Engage

Providing incentives and disincentives (e.g. through regulation and fiscal measures)

Exemplify

Making it easier for businesses and consumers to act (e.g. Ensuring availability and building understanding of green choices)

20. It will also be important to integrate a deep understanding of the motivators and barriers to adopting pro-environmental behaviours into our policy framework. We have already made some significant steps in this direction with documents such as the Framework for Sustainable Lifestyles and the substantial evidence base which underpins it, and the efforts to value natural capital found in the NEWP. This work will continue and develop our approach over time.

21. The response to part “e” below gives further detail on the policies which the government is developing across specific policy areas.

(d) The policy and institutional “framework” required to create the right conditions for the green economy to thrive, and whether the Government’s forthcoming Green Economy Roadmap provides this framework. Does the Roadmap deliver a clear vision of the Green Economy?

22. To invest in new systems, processes and tools, businesses require certainty on Government action. ETGE aims to help set out the Government’s approach to building the green economy and serves as a tool to inform continuing dialogue between government, business and communities. Alongside, we have produced a visual timeline for the key policies to drive the transition to a green economy and an indication of their direction of travel. The timeline will be updated periodically and our progress on many of these actions can be tracked through our Carbon Plan which brings together the actions across government on climate change.

23. Government is using a range of policy tools to support the transition. Using these tools in the right way that balances encouraging good behaviour and discouraging poor environmental outcomes is important for ensuring that change happens, that benefits from that change are maximised and costs are minimised. These tools are briefly mentioned here and are discussed in more detail in Enabling the Transition to a Green Economy; the overarching framework:

— Fiscal Measures— Fiscal measures, such as environmental taxes, can be effective in driving change. They can, for example, work to discourage damaging environmental behaviours (eg Climate Change Levy, Landfill tax, carbon price floor); incentivise environmentally-friendly products (eg Vehicle Excise Duty) and energy efficiency (eg the Green Deal, Climate Change Agreements; Enhanced Capital Allowances). To support de-carbonisation of electricity supplies and provide certainty for investors on the carbon price, a carbon price floor was announced in Budget 2011. The Government will increase the proportion of tax revenue accounted for by environmental taxes. Where appropriate, measures will be targeted to maximise opportunities for green growth in the UK.

— Regulation— Regulation has been, and will remain, an important tool in managing environmental risks and impacts. It can offer advantages such as setting a clear direction of travel and ensuring a level playing field. It is important that regulation is only used when there are no better alternatives. The principles underpinning the Coalition Government’s approach to regulation can be found at: www.bis.gov.uk/assets/biscore/better-regulation/docs/r/10–1155-reducing-regulation-made-simple.pdf.
— Finance—The Green Investment Bank aims to accelerate private sector investment in the UK’s transition to a green economy. Its initial remit will be to focus on green infrastructure assets and late-stage innovation. It is intended to achieve significant green impacts and make a financial return. Government support and funding for innovation in low carbon technologies is provided by a number of sources, including the Technology Strategy Board, the Carbon Trust and the Energy Technologies Institute.

— Market Reform—In some cases, Government has to fundamentally reform the market in order to signal the need for change and give the right incentives. For instance, the government White Paper on Electricity Market Reform sets out the commitment to transform the UK’s electricity system to ensure that our future electricity supply is secure, low-carbon and affordable.

— International—Many environmental issues, such as climate change and biodiversity loss, are global in nature and will need an international response. We need a global shift, both to ensure effective joint action and also to avoid undermining the competitiveness of UK businesses. Government continues to push the EU to move to a 30% target, alongside working in international fora such as the G20 and Rio+20 to advance the topic of green growth. The FCO will further utilise strong bilateral relationships to encourage a greener development path in emerging markets and beyond.

— Voluntary Agreements—A wide range of voluntary agreements have been used for different green economy issues, from single, tangible issues (eg the use of recycled paper content in newspapers) to more complex supply chain issues (eg the sustainable clothing roadmap). This voluntary approach is less burdensome than regulation, and, developed intelligently, can achieve positive outcomes freeing businesses and society from unnecessary obligations, improving competitiveness and allowing people to take greater responsibility for their own lives.

— Market based instruments can help to establish the right incentives for participants. The EU Emissions Trading System places an explicit cap on the volume of emissions from ETS sectors and allows trading between participants. This incentivises decarbonisation of production, but ensures that this occurs where the cost is lowest. The creation of a price for carbon through this system is an important part of incentivising wider investment in both abatement technology and low carbon generation.

— Public Procurement and leading by example—The public sector has major economic and environmental impacts. In 2009–10, the public sector spent £236bn on goods and services, Government operations used 36 million m³ of water and resulted in over 296,000 tonnes of waste. Shifting public procurement and operations towards greener models can increase the market for greener products and services, and provide opportunities for businesses. Government is also leading by example via the Greening Government Commitments (GGC—announced 28 February 2011), which set ambitious goals to drive efficiency and reform in the way we manage our estate and reduce our environmental impact. In May 2010 the Government set a target to reduce its carbon emissions from its office estate by 10% over the next 12 months. A reduction of over 104,000 tonnes of carbon was achieved—a saving of nearly 14%.

— Advice—Access to tailored advice and information about environmental impact can make it easier for businesses to green their operations, to produce greener products and services, and for consumers to choose them. Government has a role in helping to provide some of this information to businesses—particularly, for example, on the expected impacts of climate change, resource efficiency, and resource risks. Government will continue to make simple-to-use information available to business in these areas via its expert delivery bodies such as the Waste and Resources Action Programme (WRAP) or via its online portal BusinessLink.gov. In addition, from late 2012, the Green Deal financing mechanism will also include up-front advice on measures and behaviours that can help businesses and consumers improve their energy efficiency.

24. We will continue work towards reforming our regulatory frameworks moving towards more efficient mixes of instruments to achieve environmental outcomes, for example using market-based instruments where possible rather than prescriptive regulations. For example, a programme of work is underway in Defra, including much better evidence about the stock of regulation and about the effectiveness and efficiency of available policy approaches.

(e) Priorities for action, including those sectors of the economy crucial for creating the conditions for a green economy

25. The ETGE highlights current government action across a range of policy areas. This emphasises the fact that a green economy is not a sub-set of the economy at large—our whole economy needs to be green.

26. Some actions are grouped into high level areas in the ETGE. For example, the UK climate change and emissions framework looks at the risks and opportunities presented by climate change and covers areas such as low carbon and renewable energy, greener transport and emissions reduction. Policies in this area include
removal of energy efficiency barriers under the Green Deal, the setting of Carbon Budgets to 2027 and
developing a Climate Change Risk Assessment, and a wide range of sectors are affected by this work. A
resource-smart economy covers resource and energy efficiency in a green economy, sustainable products and
service, water efficiency, waste, marine management, agricultural efficiency and biodiversity improvement.
Policies include movement towards a “zero waste” economy and various initiatives to provide advice and
courage voluntary agreements across the economy.

27. We will continue to focus on ensuring businesses realise the benefits of being more resource efficient
and through that more competitive. Better management of natural resources is a financial and environmental
opportunity. Research for Defra estimated UK businesses could save around £23bn and 29MtCO2e (about 4%
of total emissions) annually by using resources more efficiently.

28. The Renewable Energy Roadmap, meanwhile, which was published on 12 July (see link in annex),
focuses on 8 key technologies which have either the greatest potential to help meet the 2020 target in a cost
effective and sustainable way, or offer the greatest potential for the UK in the decades that follow. The roadmap
sets out a comprehensive suite of targeted, practical actions to remove barriers and includes an action plan for
each of the 8 technologies which shows estimated changes in capacity and growth rate, identified challenges
to their deployment and a bespoke package of actions to address those challenges.

29. Work continues to explore the opportunities presented by the transition to a green economy and help UK
businesses capitalise on these. For example, the UK has a strong comparative advantage in traditional
environmental goods and services, such as recycling and water treatment. Emerging sectors— like wind,
photovoltaics and carbon finance— are the strongest growth areas, both in terms of sales and employment.

30. As part of the transition to a green economy we need to ensure that energy-intensive industries remain
competitive and that we send a clear message that the UK is open for business. There would be no advantage—
both for the UK economy and in terms of global emissions reductions—in simply forcing UK businesses to
relocate to other countries where carbon emissions continue unabated.

31. In addition to the measures set out in Budget 2011, we will take steps to reduce the impact of government
policy on the cost of electricity for energy intensive manufacturers whose international competitiveness is most
affected by our energy and climate change policies and to support EIIIs in becoming more energy and carbon
efficient, where it would be cost effective for them to do so. We are currently working with industry on this
and will announce a package of measures by the end of the year.

32. The National Ecosystem Assessment published in June, shows the enormous value to the economy of
properly managing the natural environment and resources beyond the traditional market prices on which they
are valued. The Natural Environment White Paper published in June set out measures to better connect people
and nature. Getting there will require better data on the value of nature, to which end a business led Ecosystems
Taskforce is being set up to expand business opportunities for new products and services that benefit the
economy and environment alike. In addition, a Natural Capital Committee will put natural value at the heart
of Government’s economic thinking. Finally the Government’s Waste Review is driving innovation in the waste
and recycling sector.

(f) The role of consumers, businesses, non-government organisations, and international bodies in delivering,
and stimulating demand for, a green economy

33. A green economy will only be achieved through working together— as noted already, that means
Government working with businesses, consumers and with civil society. The commitments in ETGE
demonstrate a shared responsibility to take action.

Consumers

34. The transition to a green economy will depend on the development of and demand for greener goods
and services across the whole economy. Consumer demand will therefore need to adapt and shift towards
products and services that are greener, more efficient and competitively priced. Where this happens responsive
businesses will need to take account of the environmental impact of their products, services and sustainable
business practices at home and abroad. This will apply equally to the whole supply chain, and the work
Government is doing to facilitate open-source access to supply chain impact data (carbon, energy and water
initially) will help enable this transformation. Therefore, a company will have to consider the practices of those
with whom it does business (manufacturers, distributors, retailers etc.). Increasingly businesses might be held
to account by their customers for the impact they have on the environment, which has reputational issues
for businesses.

35. Our research demonstrates the important role of trusted retailers in influencing consumer behaviour and
shifting peoples’ willingness to buy and use more sustainable products. Government has published its research,
synthesised into the Framework for Sustainable Living for advice on best practice approaches, and continues
to work on a range of partnership projects with businesses (including retailers) to stimulate improvements on
a range of issues.
36. Measures such as the mass rollout of smart meters will ensure consumers are better informed. Consumers will be provided with near real-time information on energy consumption, enabling them to monitor and manage their energy consumption, save money and reduce carbon emissions. Bills will be accurate and switching between suppliers will be smoother and faster. New products and services will be supported in a vibrant, competitive, more efficient market in energy and energy management services. Meanwhile the Green Deal and Energy Company Obligation (see annex for more details) will create the financing mechanisms and support needed to drive investment in energy saving measures in our homes and businesses. And the feed-in tariffs (FITs) scheme has been a success since its launch in April 2010 with over 69,300 FITs installations registered to date.

Businesses

37. There will be both opportunities and challenges from the transition to a green economy and businesses will need to adapt to take advantage of benefits and manage costs and risks. Impacts will be felt by sectors of the economy in different ways and to varying degrees. And the context of the transition will continue to be strong pressures from our international competitors in the global economy—competition for investment, market share, new and more efficient goods and services, and the natural resources to produce them at a price that businesses, consumers and governments are prepared to pay.

38. Some sectors will see increased demand for goods and services. Some sectors will need to transform aspects of their business models to reduce their environmental impact, while others will need to manage potential increased input costs or lower or volatile demand. Some businesses are already making significant changes within their supply chains, demonstrating a willingness to lead the transformation to a more resource efficient economy. Government is working with business to enable change through greater access to data on product supply chain impacts, guidance on reporting, and facilitating voluntary initiatives (such as the Courtauld Commitment, Federation House Commitment and the pilot product roadmaps) to improve collaboration and on-the-ground improvements. Government is also working with business on new approaches to business models, and developing pilot projects to trial these.

39. The new Green Investment Bank will facilitate increased and accelerated private sector investment in infrastructure projects that support economic growth and our environmental objectives, such as offshore wind, industrial energy efficiency and commercial and industrial waste as well as growth capital for innovative green technologies. And in November 2010, BIS, DECC and Defra set up a Green Economy Council providing advice to Government on its approach to a green economy. The Council draws on high level representation from business and industry. To date the Council has looked at the ETGE document and the relationship between energy intensive industries and a transition to a green economy. The Government looks forward to continuing dialogue with Council members.

40. The Renewable Heat Incentive (RHI), meanwhile, is designed to increase significantly the level of renewable heat in Great Britain by helping to remove the financial barrier currently holding back uptake. The RHI will be launched in Phases with Phase 1 aimed at the industrial and commercial sector being open for business on 30 September, subject to State Aids. See Annex for link to further information on the RHI.

Civil Society

41. Social enterprises have a potentially significant role to play in influencing consumer demand towards greener goods and services. They have the ability to exert influence from within communities, where they are trusted and can play an inspirational role. They have the potential to provide the link between the wider green economy and the delivery of the Big Society, by acting as exemplars for environmentally responsible behaviours at the local level.

International bodies

42. The Green Growth reports from the OECD and UNEP have provided solid economic analysis around the transition to a green economy. Sharing research and best practise policy initiatives will help expedite progress in countries at all levels of development. This work needs to be further developed, however, with a particular focus on emerging and developing markets for which evidence is currently weak. The establishment of a knowledge-sharing platform with the OECD, UNEP, World Bank and Green Growth Institute will contribute to this agenda.

(g) Whether any models that more closely resemble a green economy exist elsewhere that the UK should aspire to

43. Although the UK is recognised as an international leader in environment policy, a wide range of countries have also made significant progress on the green growth agenda. Countries as diverse as South Korea, Germany, Rwanda, Brazil and China have all committed to green economy targets and provided national frameworks for achieving them. Germany and Japan also exemplify international best practise in energy efficiency, with some of the most efficient manufacturing industries in the world. Wide ranging policies in Denmark aimed at securing 100% renewable energy have contributed to the growth of successful private sector companies in these areas. The UK should continue to engage with our international partners to identify best practise in policy making,
aimed at reducing the costs necessary to deliver high ambition targets and maximise economic opportunities from the green growth agenda. The Rio+20 process offers an opportunity to identify and learn from best practice around the world.

(h) How the UK’s policies to deliver a green economy relate to actions needed to deliver the global green economy

44. There is a strong case for moving the global economy onto a greener footing: According to the Stern Review the global costs of climate change could be between 5% and 20% of GDP per annum if we fail to act, dwarfing the costs of effective international action, estimated at around 1% of GDP in 2050. In addition, the net costs of mitigation in the short to medium term will be higher if global action is delayed or if there is uncertainty about the investment and changes in behaviour needed to make the transition. Action by the UK alone (which only accounts for around 2% of global emissions) will not be sufficient—climate change is a global issue and needs a global response.

45. We need a global shift to a green economy, both to ensure effective joint action and to avoid undermining the competitiveness of UK businesses. The EU can play an important role in driving global ambition on the green economy and ensuring a level playing field. A developing EU market for green goods and services will open up bigger markets for UK businesses, helping to promote sustainable growth as well as allowing the EU to leverage its market power internationally, working in partnership with other economies to promote high environmental standards.

46. The FCO and DFID alongside BIS, DECC and DEFRA continue to work both in multilateral fora and through bilateral relationships to try and advance the green growth agenda and create the political space for a legally binding global deal. If the UK leads by example, it allows us to encourage others to take action. Innovative British policy on the green economy, such as the Green Investment Bank and the Green Deal, is attracting significant amounts of international interest.

47. FCO efforts in bilateral climate diplomacy on green growth have supported the establishment of low carbon zones in China, the introduction of a carbon tax in Australia and the development of far reaching green growth targets, with Presidential backing, in South Korea. The Government is also active in multilateral institutions and fora, working through the OECD, G20 and Rio+20, amongst others, to advance the green growth agenda.

48. The transition presents opportunities for the UK to be a global leader in areas of competitive advantage, and to increase exports of greener goods and services as global markets expand. Government can help businesses to identify and seize opportunities overseas. The UK Government will promote international action to develop a green economy, including through global agreements, EU strategies, and other initiatives, and working through the G20 and other forums to encourage green growth.

49. UKTI is leading a green export campaign which consists of a programme of activities that is helping UK companies with green solutions access international buyers and investors and boosting the reputation of the UK’s low carbon capabilities in international markets. New activities include:

— Low Carbon exhibitions in British Embassies overseas to which we bring UK companies to showcase products and services; and
— A green technology roadshow for 109 innovative SMEs to meet overseas buyers and commercial officers from 10 international markets at three locations across the UK.

50. The Rio+20 meeting will provide an opportunity to tackle action at the global level to deliver green growth, Government’s preparations are well under way for this meeting and we are actively developing ideas with the EU, internationally, with business and civil society. More detail is provided in Defra’s response to the Environmental Audit Committee’s inquiry on Rio+20.

Annex A

LIST OF RELEVANT PUBLICATIONS

Government Publications

Enabling the Transition to a Green Economy: Government and business working together and annexes, including:

Enabling the Transition to a Green Economy: challenges for businesses.
Enabling the Transition to a Green Economy: the overarching framework.
Enabling the Transition to a Green Economy: UK climate change and emissions framework.
Enabling the Transition to a Green Economy: a resource-smart economy.

Available at: http://www.businesslink.gov.uk/bdtcg/action/detail?itemId=1096705244&type=ONEOFFPAGE&furlname=greeneconomy&furlparam=greeneconomy&ref=&domain=www.businesslink.gov.uk
A framework for understanding the social impacts of policy and their impacts on wellbeing

Economic Growth and the Environment—Defra Evidence and Analysis Series, paper 2 March 2010

The Carbon Plan
Available at: http://www.decc.gov.uk/en/content/cms/tackling/carbon_plan/carbon_plan.aspx

ECO policy doc “Extra help where it is needed: A new Energy Company Obligation”
Available at: http://www.decc.gov.uk/en/content/cms/legislation/energy_bill/energy_bill.aspx

Economic Growth and the Environment—Defra Evidence and Analysis Series, paper 2 March 2010

Electricity Market Reform White Paper 2011

Framework for Sustainable Lifestyles

Available at: http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx

The Green Deal : a summary of the Government’s proposals

Growth Reviews
Available at: http://www.bis.gov.uk/growth

Available at: http://www.statistics.gov.uk/articles/nojournal/ns-report-eng.pdf

Measuring progress: Sustainable development indicators 2010
Available at: http://sd.defra.gov.uk/progress/national/annual-review/

National Ecosystems Assessment
Available at: http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx
Written evidence submitted by the TUC

The TUC is the voice of Britain at work. With 58 affiliated unions representing more than six million working people from all industries and occupations, we campaign for a fair deal at work and for social justice at home and abroad. We negotiate in Europe, and at home build links with political parties, business, local communities and wider society.

This response addresses the following questions on which the Committee has invited comments:

1. Green economy: definition, outcomes and indicators: the economic, social and environmental outcomes that a green economy should aim to deliver, and the appropriate tools and indicators to monitor progress towards such outcomes.

2. The approach required to deliver a green economy, and the aspects of the current economic model that require development, eliminating and/or new approaches to be found. What tensions might there be between economic growth and the green economy? Would “greening” the economy deliver the outcomes needed?

3. The nature of any barriers preventing the transition to a green economy.

4. The policy and institutional “framework” required to create the right conditions for the green economy to thrive, and whether the Government’s forthcoming Green Economy Roadmap provides this framework. Does the Roadmap deliver a clear vision of the green economy?
5. Priorities for action, including those sectors of the economy crucial for creating the conditions for a green economy.

**Summary**

1. A million employees work in the low carbon goods and services sector. With the economy stagnating and unemployment at a 17-year high of 2.6 million, a green economic transformation in the UK, and globally, is fundamental to tackling the challenge of climate change and boosting long-term growth.

2. The TUC believes that stakeholder consultation, policy certainty and clear long term direction are vital to securing sustained green economic growth as a key contribution to economic recovery.

**Outcomes**

3. A key objective of greening the economy is to help the UK reach its targets under the Climate Change Act 2008 and the five-year Carbon Budgets set by the independent Committee on Climate Change (CCC).

4. Inconsistencies between Government and other data on green jobs show the need for better information, the sharing of definitions of green jobs between Government and key stakeholders, and better monitoring. Government cannot afford to be complacent over its claims of green jobs growth.

5. The Government should include a stronger workplace focus for energy efficiency in which both technology and behavioural change work together.

6. Securing a Just Transition to a low carbon future is of fundamental concern to the TUC and its affiliated unions, involving key stakeholder consultation and investment in green jobs and skills.

7. A key measure of a green economy is employment growth. Whilst the whole economy needs to be involved in the green transformation, BIS should closely monitor progress in a core of key green industries.

**Barriers**

**Finance**

8. The £3 billion limit on the Green Investment Bank's available capital to at least 2015 restricts its role in the massive investment required to 2020 and beyond to renew our energy infrastructure, unless this limit is relaxed.

9. Investment finance is needed for smaller employers for technology innovation in high using energy sectors, like ceramics.

**Skills**

10. Government leadership is required to take forward the key themes raised by consultees during the low carbon skills consultation: A more flexible and responsive skills delivery system; more flexible qualifications; and more support and promotion of STEM skills.

**Public Procurement**

11. "Greening" the UK's £236 million budget for public procurement is not about spending more but spending more wisely.

12. The UK should make full use of the scope for social and environmental clauses in Government contracts, in the way that we believe other European countries do.

**Policy and Institutional Framework**

13. The Green Economy Council (GEC), a 20-member tripartite body of business and trade union representatives, co-chaired by the respective Secretaries, to advise on how government and industry can work together to support the transition to a low carbon economy, represents an important part of the institutional framework to drive green economic growth.

14. The balance of institutional reforms embodying the role of Government and its agencies, including at regional and local level, has on balance worked against green economic development.

**Priorities for Action: Sectors**

15. In response to concerns over carbon leakage, the TUC and the Energy Intensive Users Group have produced two studies on the energy cost and technology policies for these industries, to provide a firm and independent evidence base for policy interventions.

16. An Energy Intensive Industries Task Group of the Green Economy Council is examining options for a "policy package" for these industries, including some form of relief from carbon costs, and support for low carbon technology innovation.
17. These industries directly employ some 125,000 people in 2,800 enterprises across the UK and many more are employed in their supply chains. Their products and services are vital to a domestic low carbon economy.

1. GREEN ECONOMY: DEFINITION, OUTCOMES AND INDICATORS

Contribution to economic growth and recovery

1. The BIS annual market analysis of the low carbon goods and services sector estimates its workforce at just under one million employees. The TUC believes that a green economic transformation in the UK, and globally, is fundamental to tackling the challenge of climate change. With the economy stagnating and unemployment at a 17-year high of 2,566,000 in the three months to August 2011, the green economy has much to offer as a growth pathway for the UK. Sales from the UK’s low carbon goods and services sector were already worth some £116 billion in 2009-10, an increase (before inflation) of 4.3% on the previous year.

2. To thrive, the TUC believes that policy certainty and clear long term direction is as important for “green growth” as for any sector of the economy. Whilst we have adopted climate change and emissions reductions targets that are specific, measurable and verifiable against long term objectives, much of the policy framework for a green economy is still work in progress. Moreover, green growth has been disadvantaged by recent high level changes of direction—over the Carbon Reduction Commitment (CRC), the Renewable Heat Incentive or the Feed-in Tariff, for example.

Environmental outcomes of the green economy

3. A key objective of greening the economy is to help the UK reach its targets under the Climate Change Act 2008 and the five-year Carbon Budgets set by the independent Committee on Climate Change (CCC). The fundamental outcomes that a green economy should help deliver are the emissions reductions milestones to 2020 (34%), 2025 (50%) and 2050 (80%+).

4. Carbon Budgets provide pathways for emissions reductions in three key industrial sectors:
   - decarbonised energy supply;
   - transport; and
   - energy efficiency at home and at work.

These sectors stand as clear priorities for Government leadership to realise their full potential for green economic growth.

Energy efficiency outcomes

5. As noted above, energy efficiency is the cross-cutting priority within the CCC’s Carbon Budgets. Energy efficiency is a challenge for the whole economy, and in this respect the TUC welcomes the perspective adopted in the Government’s recent report, Enabling the Transition to a Green Economy (August 2011), which states that: “Our whole economy needs to be green. A green economy will maximise value and growth across the whole economy, while managing natural assets sustainably”.

6. The TUC has consistently supported a whole economy policy framework for tackling climate change, viewing every job as potentially a “green or greener job”, if employers, employees and their trade unions work together towards more sustainable ways to produce goods and services. By extension, we would argue that every workplace can be a green workplace.

7. This rationale underpins the TUC’s Greenworkplaces projects. Greenworks, a report of the TUC’s Greenworkplaces Projects for 2008-10, describes the work of 13 pilot projects in the public and private sectors in enabling resource and energy efficiency at work. The projects secured energy and resource efficiencies in a wide range of organisations in the public and private sectors through joint union-management-employee initiatives. They are now part of a much wider TUC network of green workplace initiatives.

8. The TUC would therefore encourage Government to include a stronger workplace focus for energy efficiency in which both technology and behavioural change work together.

Just Transition outcomes of a green economy

9. Securing a Just Transition to a low carbon future is of fundamental concern to the TUC and its affiliated unions. As we explained in our recent study, A Green and fair Future, Just Transition is about “recognising and planning fairly for the huge changes that a genuinely green and sustainable economy will bring. In the past, significant periods of economic change and restructuring have often happened in a chaotic fashion, leaving ordinary people, families and communities to bear the brunt of the transition to new ways of producing wealth”.

10. The notion of “Just Transition” seeks to avoid this kind of injustice. The Just Transition principles include:
   - stakeholder consultation—inclusive consultation on changes to the world of work—at all levels, from the workplace to national government, including representatives from business, trade unions, local government and community bodies;
— green jobs— investing in the technologies and infrastructure to meet the sustainability challenges for a low carbon, resource-efficient future;
— green skills— investing in skills and training programmes, from the workplace to national levels, to equip employees with the skills for a low carbon, resource-efficient economy; and
— respect for labour and human rights in the transformation to a sustainable future.

11. Effective dialogue and consultation between government, business and unions is essential to secure change through informed consent at the pace and scale required. We welcomed the government’s decision in November 2010 to set up a new, high level, tripartite body, the Green Economy Council (GEC), with business and trade union representation, and co-chaired by the respective Secretaries of State for Business, Energy & Climate Change and the Environment and Rural Affairs (see also para. 41, below). The Council’s remit is to advise on how government and industry can work together to support the transition to a green, low carbon economy.

Green employment indicators

12. A key measure of a green economy is employment growth. Whilst we would argue that the whole economy needs to be involved in the green transformation, there is nonetheless a core of key green industries that characterise a green economy, whose progress should be closely and accurately monitored.

13. BIS publishes an annual market analysis of the UK’s low carbon environmental goods and services (LCEGS) sectors which provides a measure of green economic growth. Its latest report (2009–10) shows the potential of these industries. The report takes an inclusive, bottom-up approach to defining these sectors, covering some 2,800 activities in 24 sub-divisions, from carbon finance and CCS to renewables design, manufacture and installation. The report found:
— UK sales in LCEGS products and services grew by 4.3% (before inflation) in 2009-10 on the previous year, to £116.8 billion;
— 51,611 UK-based companies, a decrease of 1.2% on the previous study; and
— 914,273 employees, an increase of 0.5%.

14. Enabling the Transition noted that “The global low-carbon market was worth more than £3.2 trillion in 2009–10 and is projected to reach £4 trillion by 2015 as economies around the world invest in low-carbon technologies across a broad range of sectors. The UK share of that market is more than £116 billion in 2009–10, but it could be much larger”.

15. However, there may be some concern over the accuracy of the BIS data in some sub-sectors:
— UK Wind industry: the BIS study found 91,194 employees in the wind industry (page 26), significantly above the figure reported by Renewable UK and Energy & Utility Skills (2011), where the “wind energy workforce nearly doubled to 9,200 direct FTE employees” in 2010.
— UK Solar PV: BIS estimated 39,200 employees, much higher than the figure issued by the Renewable Energy Association (2011) of 25,000 people, or 22,000 more than when the UK Feed-in Tariff (FIT) scheme began last year.

16. These inconsistencies show the need for better data, the sharing of definitions of green jobs between Government and key stakeholders, and better monitoring. Government cannot afford to be complacent over its claims of green jobs growth.

2. The nature of any barriers preventing the transition to a green economy

17. Among the barriers impeding the transition to a green economy, the TUC would highlight the following as particularly significant:
— Finance.
— Green skills.
— Public procurement.

Finance

18. Enabling the Transition acknowledges that finance is one of the “necessary mechanisms” for green growth: “Our Green Investment Bank which will facilitate increased and accelerated private sector investment in infrastructure projects that support economic growth and our environmental objectives, such as offshore wind, industrial energy efficiency and commercial and industrial waste as well as growth capital for innovative green technologies”.

19. The TUC welcomes the Coalition’s vision for the Green Investment Bank (GIB) (May 2011), clarifying its operational independence to fulfil a mandate “to accelerate private sector investment in the UK’s transition to a green economy”. Financing priorities include offshore wind investment, non-domestic energy efficiency, waste and the opening phases of the Green Deal.
20. However, the £3 billion limit on the bank’s available capital to at least 2015 means the GIB can only play a minor role in the massive investment required to 2020 and beyond to renew our energy infrastructure. To this £110 billion challenge should be added a multitude of other green investments including the government’s flagship Green Deal home insulation scheme and a number of risk and financial products that a well-funded GIB could facilitate in the offshore wind generation, Carbon Capture & Storage (CCS) and energy efficiency segments.

21. Ernst & Young\textsuperscript{iv} have estimated a total funding requirement, in order for UK PLC as a whole to implement the country’s low carbon agenda, to be approximately £450 billion until 2025, including all the energy efficiency programme’s capital requirements.

22. Furthermore, investment finance is needed for technology innovation in high energy sectors. A joint TUC/Energy Intensive Users’ Group study\textsuperscript{v} (July 2011) examined the low carbon technology pathways for the energy intensive industries. In the case of the ceramics sector, with some 21,000 employees in 750 enterprises (see table 1), the British Ceramic Confederation commented that the Green Investment Bank was potentially useful as a provider of capital for energy efficiency projects with proven technologies. However, the bank’s exact role and function remained unclear. The Federation commented that the recession had run down cash in many smaller companies compared with many European competitors (who were able to use temporary short time working compensation schemes). Many UK banks would also not lend to extend overdrafts even to expand production or help credit as firms pulled out of the recession, leading the Federation to call on Government to recognise that conventional finance is often not available for this type of work.

23. The financial cap on the GIB reflects the Treasury’s insistence on keeping the GIB on the government’s balance sheet, and is therefore tied to the coalition’s fiscal policy. The TUC does not believe that this ideologically driven position is good green economics: most other European public infrastructure banks do not feature on their balance sheets. The TUC has argued that the government should free the GIB to deliver green investment at the scale and pace required for a green recovery. The GIB should be working more closely with the Green Economy Council to ensure that it helps to deliver on the priorities that its stakeholders would identify.

Green Skills

24. The TUC has expressed concerns over the apparent lack of government leadership on the development of a skills strategy for a low carbon economy. The Coalition’s response to the previous administration’s consultation, Meeting the Low Carbon Skills Challenge\textsuperscript{vi} (December 2010) acknowledged that “Our skills system needs to be able to respond rapidly and flexibly to these demands. Action will need to be taken, not just by our schools, colleges and universities, but by our industry-led skills partners and most importantly by individuals and by businesses”.

25. However, it is not clear how the Government is responding to the three keys themes raised by consultees during the consultation, including the need for:

- A more flexible and responsive skills delivery system, which better reflects current and future business needs. Low carbon businesses can be poor at articulating their skills needs … we will need to find better ways to inform and stimulate demand if we are to have the skilled workforce we need in the numbers required.

- More flexible qualifications, which support work-based learning. Many see continuous career development as key to a more flexible and productive workforce, particularly where new combinations of skills are needed. Businesses and employees must understand that skills development is a continuous process, requiring co-investment.

- More support and promotion of Science, Technology, Engineering and maths (STEM) skills, to improve the STEM skills pipeline, and so that the UK workforce has a greater basic understanding of sciences and mathematics on which to build.

26. Enabling the Transition touches on aspects of such a strategy, but falls short of the necessary overall, government-led approach required. The government is right to point to the work of the “skills for a green economy” grouping of Sector Skills Councils to help business understand changing skills requirements. And we welcome the acknowledgement of the TUC’s Unionlearn services’ efforts to improve the quality of skills provision in the further education system and raise awareness and understanding of the green economy through the work to support lifelong learning among the workforce.

27. However, the Government has yet to define the strategic role for itself, which we would suggest should include a clear Ministerial lead and the establishment of a stakeholder subcommittee to the Green Economy Council, concentrating on skills matters.

28. The report also says disappointingly little about higher education or STEM skills which are of great strategic importance. Clearer examples of good practice and strategic direction are an absolute necessity. And the document disappointingly does little to challenge employers to greater ambition and commitment to investment in green skills, also overlooking the value of collaborative work particularly at a sectoral level. We would also like to see more consistently positive messages about investing in the existing workforce.
29. We would still like to see the UK Commission for Employment & Skills (UKCES) resourced to put together a cross sectoral plan as had been suggested at earlier stakeholder discussions. We welcome the overall commitment to boosting the capacity of further education to deliver green skills training and the engagement of our affiliate the Universities and Colleges Union (UCU) on the Learning and Skills Improvement Service (LSIS) sustainability steering panel. However, we are also concerned that reduced resourcing and the loosening of relationships between colleges, central government and state agencies could impact on the ability of LSIS to deliver.

Public procurement

30. “Greening” the UK’s £236 million budget for public procurement is not about spending more but spending more wisely. In 2009–10, we spent more than £236 billion procuring goods and services, with local authorities accounting for around a third (£86 billion). So how that money is directed can have a major impact on stimulating demand for more sustainable products and services.

31. This was acknowledged among the reforms in the Government’s Plan for Growth committing it to “leveraging government’s public procurement power to help drive new markets in green products and services”. Given the predominance of small firms in many emerging “green” sectors—for example there are some 4,000 solar companies in the UK employing a total of 25,000 staff—reforms to make it much easier for small businesses to access contracting opportunities should reinforce this move.

32. The TUC has consistently argued that the Government should ensure that the UK makes full use of the scope for social clauses, in the way that we believe other European countries do, because we believe this would be beneficial to the UK economy and society. However, we have been thwarted by what we believe to be government policy that is oriented towards free-market and low cost considerations.

33. Public procurement rules of individual member states are governed by EU law. This is designed to ensure that open competition is maintained. However, it is not clear that successive UK Governments have interpreted EU law in ways that have positively encouraged domestic industries in other Member States.

34. It is illegal for any public sector purchaser to offer contracts simply to companies from its home country. However, it is legally acceptable to include clauses into contracts for social, economic or environmental reasons. These clauses must be relevant to the subject of the contract and must be included in tender documents from the outset.

35. Specifically, it is stated in the relevant EU Directive (2004/18/EC) that:
   - winning bids for procurement contracts should be based on the most economically advantageous tender “from the point of view of the contracting authority”.
   - Article 26 of the Directive states that: “Contracting authorities may lay down special conditions relating to the performance of a contract [which]... may in particular, concern social and environmental considerations”.
   - Recital 33 argues that such conditions “may, in particular, be intended to favour on-site vocational training, the employment of people experiencing particular difficulty achieving integration, the fight against unemployment or the protection of the environment”.

36. Needless to say, these articles and recitals have attracted a degree of judicial interest, as to when they can and cannot be used, but their intention is clear.

37. We would like to see UK procurement policy supporting industries in the UK in the way that other EU Member States do. The railway industry is clearly central to a low carbon transport strategy. And we want to see trainmaking succeed in the UK. It is therefore unfortunate that the decision on the Bombardier contract, Derby, is likely to lead to the loss of UK trainmaking capacity. We would have preferred to have seen the contract cast in such a way as to maximise the potential benefit to the UK of social and environmental considerations.

38. Since the Bombardier bid would have retained skilled jobs in the UK and protected train making in Derby, there were clear industrial benefits on offer had it won the contract. According to Nigel Mills, the Conservative MP for Amber Valley, speaking in an adjournment debate on 12 July 2011, weighting for overall socio-economic considerations was not included in the specifications.

39. In the TUC’s 2011 Budget Submission, we called for “a task force, comprising Ministers and Officials from BIS, DWP, DECC, the Cabinet Office and the Treasury, to consider a procurement policy that increases the UK’s levels of skills, sustainability and employability, as well as value for money, and to report in the Autumn. Employers and trade unions should be asked to give evidence to this task force”. We still believe that the creation of such a task force should be a Government priority, and also that greening public procurement should be a priority for the Green Economy Council to review.
3. The Policy and Institutional “Framework” Required to Create the Right Conditions for the Green Economy to Thrive

40. As noted earlier, the TUC has consistently promoted the notion of effective dialogue and consultation between government, business and unions on the right policy framework to drive investment in green jobs and skills for a low carbon economy. In brief, we would see the key elements of such a policy framework as including:

— Binding high level commitments to reduce emissions on a sustainable long-term pathway, as set by the Climate Change Act 2008 and detailed in successive Carbon Budgets from the independent Committee on Climate Change (CCC).

— National stakeholder consultations on green economic issues.

— A regulatory framework to encourage massive investment in employees, skills and infrastructure, including a stable floor price for carbon and measures to drive investment in low carbon energy supply and other low carbon technology.

— Priority for green economic growth and emissions reductions given to the three broad sectors identified in the Carbon Budgets: energy supply, transport and energy efficiency at home and at work.

— A bespoke strategy to secure our energy intensive industries in a low carbon economy (steel, aluminium and ceramics, bricks, glass, cement, etc) to avoid carbon leakage and the loss of jobs and investment.

— Government leadership in cross cutting areas: low carbon skills, support for innovation, finance for a low carbon economy, green procurement, and the development of UK supply chains.

— A binding UN global agreement on climate change.

Green Economy Council

41. The TUC welcomed the Government’s decision in November 2010 to set up the Green Economy Council (GEC). The 20-member tripartite body of business and trade union representatives is co-chaired by the respective Secretaries of State for Business, Energy & Climate Change and the Environment and Rural Affairs. Its remit is to advise on how government and industry can work together to support the transition to a green, low carbon economy. It represents a further important part of the high level institutional framework to drive forward green economic growth.

42. The GEC is supported by:

— a Working Group examining policy in more detail and advising on a future work programme; and

— an Energy Intensive Industries Task Group, to examine options for a “policy package” for these industries, following an initiative from the Energy Secretary earlier in 2011. The Task Group is a response to intense disquiet from business and trade unions over energy prices and jobs losses facing industries such as steel, cement, ceramics, certain chemicals, aluminum and others. The group will bring together evidence on how they are affected by energy and climate change policies, including how investment decisions may be affected. It will make policy proposals to the GEC in Autumn 2011, including measures to address the early impact of the carbon tax.

43. The GEC has met twice, and has considered a draft of the Green Economy Roadmap; growth of the Low Carbon Environmental Goods and Services sector; progress on the Energy Intensive Industries package; and is currently developing a forward work programme that is likely to cover skills for the green economy; competitiveness issues; public procurement; levering investment; infrastructure; and innovation.

A Green economy roadmap

44. When it set up the GEC, the Government committed to consulting it on a Green Economy Roadmap. Having discussed this with GEC members and advisers earlier in 2011, the Government published an online report, Enabling the Transition to a Green Economy in August 2011. Enabling the Transition provides a useful overview of the Government’s vision for a green economy. It took note of comments from GEC members, and is valuable as a communication tool to interested businesses.

45. However, the final policy framing and communications strategy for Enabling the Transition were not shared with Council members, leaving a sense perhaps of a missed opportunity to draw fully on their experience and advice in shaping the strategy.

46. One effect has been that the report does not demonstrate the full potential of the green economy or the full scope of Government aims to maximise ambition for employment and skills growth. It would have been useful to include:

— near-term jobs targets in key sectors (energy supply— renewables, CCS, new nuclear -the Green deal, low emission vehicles), and the means to achieve them; and
— commitment to developing policies, including some new initiatives, in for example public procurement, that are proof against short-term political considerations (perhaps underpinned by binding contracts). Short-term policy changes to the feed-in tariff system and the CRC have undermined investor certainty, a key consideration in the earliest phases on technology innovation when risks are highest.

Recent changes to the institutional framework

47. Changes of policy and a new vision for the role of government vs the market were inevitable from May 2010. However, the balance of institutional reforms embodying the role of Government and its agencies has on balance worked against green economic development. As regards policies for a green economy, the Government withdrew some important parts of an institutional framework for green growth, such as Regional Development Agencies, the previous administration’s £1.4 million Strategic Investment Fund, and tripartite bodies such as the Renewables Advisory Board.

48. However, the TUC welcomed the decision to retain the £60 million competition for dockside developments to support the offshore wind industry. The Energy Minister kept to a pre-election commitment to provide £1 billion of public funding for the first of four carbon capture demonstration projects, yet the decision to cancel the Longannet project in mid-October was immensely disappointing. Government has promised continued public support for four CCS projects, which now need to be progressed with greater urgency. The Coalition has also introduced a £1.4 million Regional Growth Fund, but spread its benefits over three years, and without explicit and transparent green objectives, so that little of the first tranche of £450 million in grants (supporting 27,000 jobs) went to “green” enterprises.

49. However, during the past two years, UK manufacturing employment has fallen by 357,000, clearly pointing to the need for a new approach to industrial policy. Many decisions that will be good for green growth, such as addressing barriers like finance, skills and public procurement, should benefit the wider manufacturing sector.

4. PRIORITIES FOR ACTION, INCLUDING THOSE SECTORS OF THE ECONOMY CRUCIAL FOR CREATING THE CONDITIONS FOR A GREEN ECONOMY

Energy intensive industries

50. In its Carbon Budgets report (October 2011) the Environmental Audit Committee called for an evidence-based approach to any policies designed to secure the energy intensive industries against the dangers of carbon leakage: “We recognise the importance of policy measures to help energy intensive industries, but before these are introduced a comprehensive and robust assessment of the actual risk to each sector affected is needed, on a case by case basis”.

51. Companies in the energy intensive sector provide products for a low carbon economy, materials for construction and the development of low carbon power generation—steel for wind turbines, glass for double glazing, for example. Technology innovation, the joint report from the TUC and the Energy Intensive Industries Users Group (EIUG) summarised the economic benefits (see figure 1) of iron and steel manufacture, aluminium, ceramics, cement, lime and plaster, glass, pulp and paper, nitrogen fertilizers and basic inorganic chemicals as follows:

- Directly employ some 125,000 people in 2,800 enterprises across the UK with many more are employed in their supply chains.

- Annual turnover of £23 billion, providing £5 billion of gross value added to the UK economy. Employment costs of £3.8 billion (below).

- Purchasing power of some £17 billion.

- Significant contributions in terms of direct regional employment and indirect economic value added through their diverse supply chains.

52. In response to concerns over carbon leakage—the loss of jobs and investment to competitors with weaker climate change policies than ours, or none at all—from employers and trade unions across the energy intensive industries, the Government is currently developing a package of measures to help secure their future in the UK’s low carbon economy.

53. To establish a firm and independent evidence base for policy interventions, the TUC and the Energy Intensive Users Group have produced two studies on the energy cost and technology policies for these industries. The CBI has also outlined some of the policy changes needed in its report, Protecting the UK’s foundations: A blueprint for energy-intensive industries. The CBI highlighted exemptions from the carbon floor price (“the most effective immediate solution”) and support for the further development of energy efficiency technologies. The TUC—EIUG have also prioritised CCS for industry and support for technology innovation from the Green Investment Bank.

54. A new study from energy consultants Roland Berger confirms the enormous potential for improving energy efficiency, particularly in energy-intensive industries.
55. From an innovation and value-added perspective, the energy intensive industries provide employment and training for highly qualified staff. A manufacturing job in the steel or chemical industries contributes around £70,000 per employee to regional gross value added (GVA), perhaps double the added value of retail or warehousing position, for example. GVA per employee is significantly higher in energy intensive industries than in the broader economy.

Figure 1
CONTRIBUTION OF ENERGY INTENSIVE SECTORS TO THE UK ECONOMY (2009)

<table>
<thead>
<tr>
<th>SIC (2007 Revised)</th>
<th>Description</th>
<th>Year</th>
<th>Number of enterprises</th>
<th>Total turnover</th>
<th>Approximate gross value added at basic prices</th>
<th>Total purchases of goods, materials and services</th>
<th>Total employment - average during the year</th>
<th>Total employment costs</th>
<th>Notes</th>
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<td>24.1, 24.2, 24.3</td>
<td>Iron and Steel</td>
<td>2009</td>
<td>438</td>
<td>8,169</td>
<td>1,089</td>
<td>6,766</td>
<td>37</td>
<td>1,209</td>
<td></td>
</tr>
<tr>
<td>20.11, 20.13</td>
<td>Basic Inorganic Chemicals</td>
<td>2009</td>
<td>122</td>
<td>3,113</td>
<td>1,431</td>
<td>1,661</td>
<td>11</td>
<td>468</td>
<td>Excludes sectors with high proportion of organic chemicals production</td>
</tr>
<tr>
<td>23.2, 23.3, 23.4</td>
<td>Ceramics</td>
<td>2009</td>
<td>745</td>
<td>1,781</td>
<td>963</td>
<td>1,120</td>
<td>21</td>
<td>534</td>
<td></td>
</tr>
<tr>
<td>23.1</td>
<td>Glass</td>
<td>2009</td>
<td>963</td>
<td>2,872</td>
<td>894</td>
<td>1,972</td>
<td>27</td>
<td>662</td>
<td></td>
</tr>
<tr>
<td>24.42</td>
<td>Aluminium</td>
<td>2009</td>
<td>166</td>
<td>1,426</td>
<td>131</td>
<td>1,212</td>
<td>7</td>
<td>206</td>
<td></td>
</tr>
<tr>
<td>23.5</td>
<td>Cement and Lime</td>
<td>2009</td>
<td>23</td>
<td>748</td>
<td>279</td>
<td>492</td>
<td>6</td>
<td>131</td>
<td></td>
</tr>
<tr>
<td>17.1</td>
<td>Pulp and Paper</td>
<td>2009</td>
<td>277</td>
<td>2,993</td>
<td>462</td>
<td>2,331</td>
<td>13</td>
<td>495</td>
<td>Excludes 17.2 Paper and Pulp Products</td>
</tr>
<tr>
<td>20.15</td>
<td>Nitrogen Fertilisers</td>
<td>2009</td>
<td>64</td>
<td>2,030</td>
<td>150</td>
<td>1,788</td>
<td>2</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>2798</td>
<td>23132</td>
<td>5199</td>
<td>17339</td>
<td>124</td>
<td>3779</td>
<td></td>
</tr>
</tbody>
</table>


56. The EIs are also characterised by strong regional concentrations of production: steel making in South Wales, Yorkshire and Humberside, and the West Midlands; ceramics in the East and West Midlands; glass, pulp and paper manufacture in the North West and South East; cement, lime and plaster plants in the East Midlands and East of England; and aluminium production in the East and West Midlands.

57. An outstanding concern for the future of these industries must be the scope and scale of any policy package, which ought to provide a sense of “manufacturing security” in the context of climate change policy to secure their place in the green economy for the long term.

TUC-EIUUG studies of the energy intensive sector

58. The key issues covered by these studies are described below.

(a) The Cumulative Impact of Climate Change Policies on UK Energy Intensive Industries—Are Policies Effectively Focussed? (2010) argued that, as tax structures stand, energy intensive industries are carrying the greatest burden of policies to tackle climate change and reduce energy use. In future, the report concluded that the impact will become even more disproportionate and intense. The report called on government to consult with industry and unions to develop a policy framework that would avoid the loss of jobs and investment to overseas competitors who have weaker climate change policies, or none at all. It found that the fundamental threat is “carbon leakage”, not only the loss of jobs, but also control over carbon emissions.

(b) Technology Innovation for Energy Intensive Industry in the UK (July 2011): argued that there is a compelling rationale for government to develop an industrial low carbon manufacturing policy, in particular for the energy intensive sector. It showed that energy costs and lack of available capital are key barriers to innovation and called on government to develop a technology innovation strategy

that includes new low carbon processes in various industries and where possible support shared solutions, such as carbon capture and storage demonstration for industries such as steel and cement making.

These reports are available at: http://www.tuc.org.uk/search/start.cfm and http://www.tuc.org.uk/industrial/tuc-19853-f0.cfm

62. A third study is underway of the economic, employment, skills and fiscal benefits of securing the energy intensive industries in the UK for the long term to overcome barriers to a wider low carbon transition.

Conclusion

63. The TUC welcomes the cross-departmental approach adopted by Government in developing a policy package for the energy intensive industries. Together with the creation of the Green Economy Council as a national forum to help shape policy, and other initiatives such as the Green Investment Bank, setting an effective floor price for carbon and other reforms to the electricity market, the makings of effective policies for the green economy are emerging. Crucial to this project are a clear leadership role for Government and a willingness to set a long term fiscal and regulatory framework to stimulate green economic recovery.

References

1 Low carbon and environmental goods and services (LCEGS): Report for 2009, BIS.
3 Low carbon and environmental goods and services (LCEGS): Report for 2009, BIS.
4 Enabling the Transition to a Greener Economy, 2011: https://online.businesslink.gov.uk/Horizontal_Services_files/Enabling_the_transition_to_a_Green_Economy__Main_D.pdf
8 Low carbon and environmental goods and services (LCEGS): Report for 2009, BIS.
9 Enabling the Transition to a Green Economy: Government and business working together, August 2011, para. 10.
13 Capitalising the Green Investment Bank: Key issues and next steps, Ernst & Young, October 2010.
17 http://www.r-e-a.net/
18 Environmental Audit Committee—Seventh Report: Carbon Budgets, October 2011.
20 Protecting the UK’s foundations: A blueprint for energy-intensive industries, CBI, 2011.
21 http://www.rolandberger.com/media/press/releases/New_study_on_energy_efficiency.html
22 27 October 2011
Written evidence submitted by the Renewable Energy Foundation

Firstly, may I thank the Committee for their very kind invitation to give evidence yesterday to the green economy inquiry.

During the course of evidence you reminded us that supplementary material could be submitted to substantiate points raised only in sketch form during the oral evidence. This email and its attachments add to the material thus far submitted.

1. Mr Colin Gibson on Costs of Wind Power

In the course of my remarks I drew attention to new work by Mr Colin Gibson (formerly Power Networks Director at National Grid) on the integration costs of wind power, which in his estimate are very considerable. Dr Edge took exception to this remark in principle, remarking that earlier studies (and I think he was referring to the UKERC study from 2008) showed that costs were low. I believe it important that members of the Committee are aware that the UKERC study is regarded by many, including Mr Gibson, as overly narrow in its focus, and that a more comprehensive methodology is required. Mr Gibson’s paper, *A Probabilistic Approach to Levelised Cost Calculations for Various Types of Electricity Generation* (2011), attempts to provide this. The paper and the accompanying spreadsheet are available from the website of the Institution of Engineers and Shipbuilders in Scotland (IESIS):

http://www.iesisenergy.org/icost/

The committee will note that Mr Gibson’s estimates of the cost per MWh of wind power in 2020 are rather higher than those circumscribed by the industry, or appreciated in government policy (median costs of £190/MWh are calculated for onshore wind and £265/MWh for offshore wind, with integration accounting for £60/MWh and £67/MWh, respectively). I suggest that this has very important implications for the prospects of a green economy under current policies, and would urge that Mr Gibson’s analysis be taken into account.

In forthcoming work from the Renewable Energy Foundation Mr Gibson’s conclusions have been used to inform an indicative calculation of likely cost under current target assumptions, with reflections on the likely impact on population-wide risk of hardship in connection with unaffordable energy. This book is currently being printed, but I will submit a copy of that work when it is available. In the meantime, I will report the findings of that calculation: assuming the technology mix projected by DECC, Mr Gibson’s calculations suggest that integration costs could add around £5 billion a year in additional costs, over and above subsidy (itself likely to be in the region of £6 billion a year to wind alone). This very high cost takes the total cost of the renewable electricity target to around £13 billion a year in 2020, not including VAT. You will appreciate that this is a very high additional cost burden.

2. Variations in Annual Output of Wind Power and thus in Fossil Fuel Demand

Dr Whitehead asked me with regard to fluctuations in output from wind power on the annual scale. I draw the Committee’s attention to Renewable Energy Foundation’s empirical work on wind power load factor in the United Kingdom, based on Ofgem data:


A copy is attached for convenience.

The Committee may wish to note that onshore load factor has varied between 21% and 27% since 2003, with 2010 being a notably low wind year, and offshore between 25% and 33% in that time (though we would be inclined to regard the variation in recent years, 29% to 33% as more representative, and I use this range in my calculation below).

As I remarked, fluctuations in load factor of this magnitude mean that the energy generated will vary considerably from year to year, with the consequence that the UK’s demand for fossil fuel will also vary significantly, thus reducing scope for long term gas contracts and increasing the UK’s exposure to short term spot markets.

Assuming, as government currently does, 13 GWs onshore and 18 GWs offshore, the energy output would, on current evidence, fluctuate between 70 and 83 TWhs in any given year. 13 TWhs is a considerable quantity of energy, and, assuming that the support plant is gas fired generation with approximately 55% thermal efficiency, would require the purchase of approximately 23 TWhs of natural gas to supply such a deficit, presumably from the more expensive short term markets.

I am not aware of rigorous work on the degree of economic risk entailed, but there are clearly reasonable grounds for concern that the benefits of the current renewables program in reducing exposure to fossil fuel prices may not be as significant as an intuitive engagement with the subject would conclude.

3. Carbon Prices and the EU ETS

Dr Bowen and I both argued in favour of simpler policy mechanisms to encourage invention and innovation in the sector, and Dr Bowen drew attention to the number of implied prices for carbon resulting from the various policies. This is an important point, and deserves further study. According to our own calculations the
implied prices in the renewable electricity subsidy mechanisms alone (Gibson’s calculations of total cost would give higher figures for wind) range from £46/tCO₂ (Biomass co-firing) to £185/tCO₂ (Offshore wind) for industrial scale generators under the Renewables Obligation, and from £174/tCO₂ (Anaerobic digestion) to £803/tCO₂ (small scale solar PV in the first iteration of the FiT; this will be reduced to ca. £400/tCO₂ under the new bands) for smaller generators under the FiT.

This compares with ca. €10/tCO₂ under the EU ETS. Moreover, and this is an important and little appreciated point, the EU ETS caps the emissions savings in the EU. Thus, additional policy mechanisms such as the RO do not add any additional emissions savings, but simply mandate the substitution of a higher cost saving instead of a cheaper saving, and indeed undermine the price of the ETS. Clearly, relying on the ETS alone would be preferable since it would give the market a single carbon price signal, thus directing the economy towards low carbon technologies at least cost. The present system seems more likely to expose the consumer to a high costs, with the entailed risks of consumer rebellion, and net negative economic impacts, as discussed in my book, The Green Mirage.

24 November 2011