

A Brighter, More Secure Future»

Low carbon priorities for the new government



»» It is critical that the UK stays on track to meet, and ideally exceed, decarbonisation path targets established by the Climate Change Act. That is why we would like to see the government agree the fifth carbon budget quickly and decisively««

Niall Dunne, BT

»» It is imperative that the transition to a low carbon economy is managed in a manner that provides legal stability and CO₂ price predictability, ensuring a level playing field««

**Dr Richard Leese,
Mineral Products Association**

»» The government should act to protect vulnerable customers from increased costs, but doing it by being too cautious about the expansion of clean energy is throwing the baby out with the bathwater««

Dr Bridget Woodman, University of Exeter

»» The lack of progress on energy efficiency means it must be prioritised by the next government. Buildings are responsible for 37% of all carbon emissions in the UK and yet the building insulation market contracted by 22% last year««

**Dame Fiona Woolf CBE,
CMS Cameron McKenna and
Aldersgate Group**

»» Our message to government is simple: be clearer about what you want and the industry will deliver at lower cost and with more local jobs««

Matthew Knight, Siemens

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Aldersgate Group

The Aldersgate Group is an alliance of leaders from business, politics and civil society that drives action for a sustainable economy.

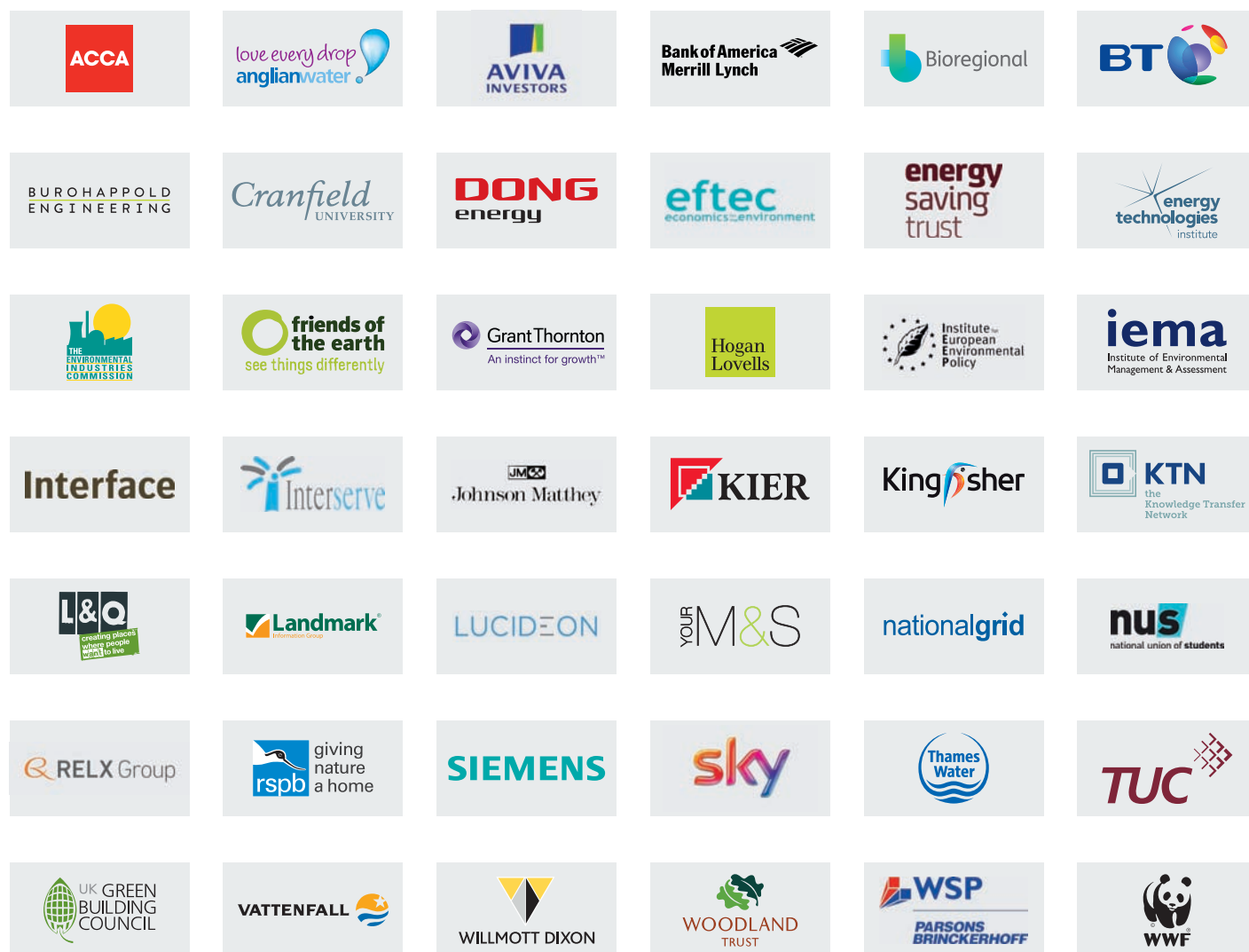
Our Members

Our members include some of the largest businesses in the UK, leading NGOs, key professional institutes and politicians of all parties. We believe that economic success, both now and in the future, depends upon a political and economic framework that delivers a healthy environment and sustainable use of resources,

good environmental performance at the organisational level, growth, jobs and competitive advantage in rapidly growing environmental sectors.

Our policy proposals are formed collaboratively and benefit from the expertise of our members who span a wide range

of industry sectors and public interests. Our breadth and collegiate approach allow us to formulate progressive policy positions to benefit all organisations and individuals in the UK.



While members support this publication and provided extensive input, individual recommendations cannot be attributed to any single member and the Aldersgate Group takes full responsibility for the views expressed.

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Foreword by the Aldersgate Group

With an annual turnover close to £122bn in 2013 – twice that of the auto-manufacturing industry – the UK's low carbon economy is thriving.



Joan Walley

The UK's low carbon sector is well placed to capitalise on new global markets, but important policy decisions loom on future support for low carbon and energy efficiency infrastructure, putting the UK at a crossroads. As our honorary president **Dame Fiona Woolf CBE of CMS Cameron McKenna** puts it, the UK now 'needs to give itself the tools to meet its carbon budgets on budget, on time and in a way that contributes positively to the economy'.

This report brings together the views of senior representatives from across the economy, academia and civil society on how this could be achieved.



Nick Molho

Several contributors such as **Piers Guy of Vattenfall UK** point out that meeting this challenge requires 'a clear direction of travel' in areas such as energy efficiency and low carbon infrastructure, without forgetting the international dimension of climate change policy or the crucial need to bring the public on board the UK's transition to an efficient and low carbon economy.

The low carbon sector needs policy clarity post 2020

With clear policy direction out to 2020, the low carbon and especially renewables sector has delivered some impressive achievements in recent years. As **Rachel Cary of DONG Energy** points out, the lifetime costs of offshore wind projects in the UK have fallen by 11% in just four years, with the newest turbines now larger than the Gherkin building, in London.

But given that major low carbon infrastructure projects can take up to 10 years to build and developers need long-term visibility to improve technologies and reduce costs, all authors agree that policy clarity for the post-2020 period is urgently needed. The policy framework must also guard against piecemeal, retrospective changes to existing policy which increase the costs of projects.

Ian Temperton of Climate Change

Capital emphasises the importance of ensuring that the projects contracted under the previous government 'really do happen'. Providing clarity on the levels of financial support available under the Levy Control Framework well into the 2020s, and ensuring these are in line with the ambition set in the carbon budgets, would be a good place to start.

Matthew Knight of Siemens notes that the 'desire not to 'pick winners' has led to the official pretence that an unrealistically wide range of technological options exist and the market will decide.' A better approach, echoed by several other authors, would be for 'the government to send clear, long-term signals about the future mix of generation it expects to see', starting with a degree of clarity on the build rate expected of each technology for the next few years.

Foreword by the Aldersgate Group

Lord Deben of the Committee on

Climate Change points out that introducing measures to provide investor confidence 'is necessary if we are to achieve the most cost effective route to our statutory target' of cutting emissions by at least 80% by 2050 and giving industry the visibility needed to plan long-term investments and cut the cost of new technologies. As **David Nussbaum of WWF-UK** reminds us, this requires also having a clear plan in place to retire the UK's oldest and most polluting coal power stations in the near future.

But **Dr Jack Frost OBE of Johnson**

Matthey also urges the government to think outside the box and consider ways of creating new markets for low carbon goods such as tackling the carbon embedded in consumer goods.

The decarbonisation challenge ahead of us is not just an issue for the power sector. As **Niall Dunne of BT** makes clear, several other areas of the economy could deliver significant carbon savings, with the Information and Communication Technology (ICT) sector having a tremendous potential for cutting emissions in cities. And **Dr Richard Leese of the Mineral Products Association** highlights that the UK should meet the decarbonisation challenge in a way that ensures energy intensive sectors such as cement get the support they need to thrive in a low carbon economy.

Enabling different sectors to seize the opportunities offered by the decarbonisation agenda will also require investment in skills for young people and those already in work, with a greater focus on tackling the UK's STEM skills gap and embedding sustainability skills through the learning and apprenticeship process. As Matthew Knight points out, greater policy clarity will also make it easier for the supply chain to take on apprentices and train them for the long term.

Make energy efficiency a national infrastructure priority

With the UK's building insulation market contracting by 22% in 2014 at a time when buildings are responsible for 37% of the UK's emissions and energy bills were still relatively high, all contributors to this report highlight how far the UK still has to go on the road towards energy efficiency.

Yet, as **Robert Lambe of Willmott Dixon**

sums up, 'with cold homes reckoned to cost the NHS around £1.3bn a year, improving home energy efficiency would significantly reduce the burden on NHS budgets, as well as improving the nation's energy security'. This sentiment is echoed by **Dr Bridget Woodman of the University of Exeter**, who urges for energy efficiency policy to stop being framed as 'an unnecessary additional cost'.

So what needs to change? As **Audrey Gallagher of Citizens Advice** highlights, energy efficiency needs to be treated by politicians as what it is: one of the most cost effective measures within the UK's decarbonisation programme. **Jade Lewis of Saint-Gobain** and many other contributors to this report argue that an important first step would be to make energy efficiency a national infrastructure priority, backed by cross departmental collaboration within government and sufficient levels of infrastructure funds.

Professor Jim Watson of the UK

Energy Research Centre argues that tailored policies to support low cost energy efficiency measures (such as a revised Energy Company Obligation scheme) and others to support more expensive efficiency measures (such as through a reformed Green Deal) will be important to see energy efficiency being delivered on the ground. **Duncan Price of BuroHappold Engineering** calls for a 'regional approach to energy markets' and many other contributors agree that delivery of energy efficiency schemes should be managed by local agencies, who are best placed to understand energy efficiency infrastructure requirements in their area. Government policy should also tap into the significant potential of efficiency in the commercial sector.

International climate policy offers government a big opportunity to make an impact

With a few months to go before the climate change summit in Paris, international climate policy is high profile and with its significant climate change diplomacy personnel, the UK could play a central role. **Benet Northcote of the John Lewis Partnership** therefore believes that 'it is vital the UK maintains its position as a world leader on climate change policy' backed up by strong commitments at home, whilst **Nick Mabey of E3G** considers that 'the single arena where this government can have the greatest impact is on the international stage'.

Foreword by the Aldersgate Group

This includes not just the Paris talks, with many contributors urging the UK and the EU to continue their previous leadership role, but also other important regional agreements such as the EU's Energy Union that could play its part in accelerating the EU's move towards an efficient low carbon economy.

The government must invest in public support for the low carbon transition

For all the policy detail required over the course of this new Parliament, communication will be equally important, with government needing to engage the public on how the UK will become a low carbon economy and how this will benefit society. **James Murray of BusinessGreen** calls for, 'all serious political leaders to present climate change and the low carbon economy as what it is – the defining issue of this, or any other generation.'

Conclusion

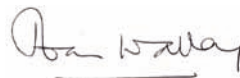
The Aldersgate Group sees three clear priorities for the new government's climate and energy policy:

1 Urgently provide greater policy clarity for the post 2020 period that investors need to invest in and reduce the cost of the UK's low carbon infrastructure. This means providing clarity as soon as possible on the size of the Levy Control Framework well into the 2020s, giving developers of different technologies a sufficiently reliable roadmap to allow them to plan their long-term investments, avoiding retrospective changes to existing policy and adopting a fifth carbon budget more promptly than the fourth. Safeguarding the Green Investment Bank's public mission, giving it extra powers and putting in place a clear plan to close our coal plants will give credibility to UK low carbon ambitions.

2 Make energy efficiency a national infrastructure priority backed up by clear government co-ordination, infrastructure funds and policies tailored to different categories of energy efficiency measures, including commercial energy efficiency.

3 Make the upcoming international negotiations on climate change in Paris a diplomatic priority, in addition to important regional milestones such as the EU's Energy Union and the implementation of the EU's 2030 climate and energy package.

Climate and energy policy isn't just about ensuring the UK's energy security affordably, whilst mitigating the risks of climate change. Beyond these important goals, the transition to an efficient and low carbon economy also represents a tremendous economic opportunity for the UK, one which James Murray refers to as 'the most exciting industrial revolution in 150 years'. The task for the new government is to ensure the UK remains an active participant in this global industrial transformation, with all government departments pulling in the same direction.



Joan Walley

Chair
Aldersgate Group



Nick Molho

Executive Director
Aldersgate Group

Introduction

Lord Deben, Chairman, Committee on Climate Change

The UK has a statutory requirement to cut its 1990 emissions of greenhouse gases by at least 80% by 2050. That's not a hope or an aim – it's a commitment enshrined in law, support for which was reiterated by the leaders of Conservative, Labour, and Liberal Democrat Parties before the last election. The 80% commitment will be reached by the carbon budgets on which the independent Climate Change Committee advises. Parliament has now endorsed budgets right up to 2027, while proposals for the years to 2032 are being prepared as I write.

So what's the need for a priority? Many people think we have enough to guarantee the business investment that action on climate change needs. They fear that anything more might bind us now to solutions which will turn out to be less than optimal in ten years time. They point to developing technologies that might replace those upon which we now rely. Above all they want the market to play as big a role as possible in decision making and avoid as much government intervention as is possible.

Now, I agree with the sentiments behind these concerns. We don't want government picking winners. We do want a portfolio of technologies that can be added to and subtracted from as our knowledge becomes clearer. But the government must create the market conditions which will encourage innovation and the commercialisation of new technologies.

We must give investors confidence and face the fact we don't have a 'free' market. Instead we have a very expensive and controlled market. Fossil fuels are sold at a price which doesn't cover the costs they impose on the NHS, local authorities, and certainly not the horrendous cost they demand of the planet. Any fool can make a profit if he doesn't include the real cost of production. He is also in a stronger position to keep out competitors if he has an already-paid-for infrastructure. So, by a mixture of inertia induced by historic investment and underpricing of carbon, those developing new technologies find it increasingly difficult in a world where size and globalisation has given such strength to the vast corporations whose profits depend on the continuance of the status quo.



Lord Deben

Introduction

The government's role must be to provide the necessary confidence for businesses and thus drive a sense of urgency to a Chief Executive who knows he'll be gone before 2020 and whose real concern is this quarter's results. We need to give businesses clear and unambiguous assurance that, if they invest in decarbonising the economy, they can depend on the government's continued commitment. That commitment is not best expressed in technology favouritism but by mechanisms that make a wide range of innovations practical and profitable. So the Chancellor's decision to commit £7.6bn in the Levy Control Framework up to 2020 was crucial. It enabled the huge development of offshore wind and solar which has begun the transformation of our energy system.

But 2020 is so very near. Investment needs assurance well into the 2020s and the need is urgent to take the Levy Control Framework to 2025 and then enable it to continue year by year afterwards. It's not for us to pick the technologies. But we must ensure that innovators know that they can plug into a system that significantly favours low carbon solutions. That's why a carbon intensity target for 2030 is a sensible proposition. Set somewhere between 50 and 100g/kWh, it would give the necessary confidence to attract the low carbon investment we need, particularly in the power sector.

Investor confidence is necessary if we are to achieve the most cost effective route to our statutory target for 2050. A decision on extending the Levy Control Framework, a carbon intensity target or both does not imply any new costs or commitments. It's simply the way to make the market work by giving today's senior management a clear indication that they need to act now on innovation, research, and technology transfer if their businesses are to thrive in ten years' time. It turns long term 2050 targets into requirements for immediate decision making. Facilitating good decisions today is imperative if this new government is to deliver on its promises on climate change.

Rachel Cary

Lead Stakeholder Adviser, DONG Energy

1 What is the priority for UK climate and energy policy in the next five years?

Providing investment clarity for the deployment of major low carbon projects such as offshore wind well into the next decade is critical if the new government is to accelerate the roll-out of the infrastructure, reduce its cost and maximise the benefits to UK plc in terms of jobs and value added to the economy.

The UK's installed offshore wind capacity has more than quadrupled since 2009 and lifetime costs have fallen by 11% in just four years. The sector looks to be well on track to reach its cost reduction target of £100/MWh for new projects in 2020.

Thanks to a clear steer from UK government policy and the EU's 2020 renewable energy target, the sector has made great achievements. The average turbine size has more than doubled in less than ten years – the first 3.6MW was deployed in 2007 at Burbo Bank and DONG Energy will be using the new 8MW turbine at the Burbo Bank Extension project due to be commissioned in 2017. The scale is incredible – each of the latest 8MW turbines is larger than the Gherkin building in London.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The offshore wind sector is coming of age but its future beyond 2020 is unclear. Given that offshore wind farms can take as long as ten years to develop, policy certainty is a key issue.

An important first step for the new government will be to extend the Levy Control Framework (LCF) to demonstrate that there is sufficient funding for new low carbon projects. However extending the LCF on its own won't be enough as it gives very limited visibility of the volume of low carbon technology needed and a supplementary mechanism will be needed to enable the offshore wind sector to maintain momentum and reduce costs further.

One option would be to adopt a 'falling auction' approach whereby offshore wind is allocated a minimum volume (GW) per year from 2020 to 2030 and developers would be able to compete to secure projects up to this volume. Applying a price cap for bids that would fall each year would ensure the cost of the set volume would also fall. Any projects above the set volume would be able to compete against other technologies in a separate auction. This would give the offshore sector the necessary volume certainty to reduce costs further whilst ensuring government is better able to forecast and limit expenditure.

3 How can the new government make significant progress in energy efficiency?

Electricity demand could be significantly reduced by installing LED lighting and replacing pumps and motors in hospitals and factories, while greater flexibility in demand could be achieved by aggregating and controlling large numbers of air conditioning units. This would help shift demand away from busy periods or periods when wind speeds are low and ensure we don't have to build an entire power system for just a few peak or low wind hours.



Rachel Cary

Ian Temperton

Head of Advisory, Climate Change Capital



Ian Temperton

1 What is the priority for UK climate and energy policy in the next five years?

In areas as long term as energy, infrastructure and climate change what one government does impacts what happens during the tenure of the subsequent government(s). Most of the investment during the last five years was, of course, made under policies implemented by the administration before that.

So priority one for the new government is to maintain confidence and stability around the Contract for Difference (CfD) regime and make sure the investments contracted under the last administration really do happen. The incoming government will have to provide clarity on the levels of financial support available, by setting a Levy Control Framework (LCF) for at least the duration of the administration to be elected in May 2020. The hope five years ago was of robust carbon pricing (through an Emissions Trading Scheme (ETS) and tax system) and of a convergence of technology costs which, in combination, would mean little if any increase in the LCF would be needed in the 2020s.

We know that these pseudo market interventions have not worked and that direct government intervention to select and support major clean energy infrastructure is here to stay. That means government deciding what it wants and getting it in the most efficient way possible. This will sadly require a meaningful extension to the LCF with all the ugly political debate that will create.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

With whom will the new government contract to build future clean power stations? While the investment task has grown, the agents of major power investment (such as the utilities) have shrunk. Many of the investments required in new clean power stations are individually the size of some of our utilities. To bequeath a low-cost, jobs-rich, clean energy investment programme to the governments of the 2020s the new government must grasp the nettle of recapitalisation (in terms of skills, people, and capital) of the utility sector, or at least the clean bits we want to keep. For smaller-scale technologies such as onshore wind and solar, this can potentially be done on the current piecemeal model, but investments in areas such as nuclear, CCS, offshore wind and other marine technologies need to be made by major industrial corporations which are capitalised for the task.

3 How can the new government make significant progress in energy efficiency?

Energy efficiency investment is held back by high transaction and information costs and attempts at policies trying to create a market-style incentive become weighed down by an excess of rules and regulation.

The least-worst solution is very similar to power stations above. Decide what needs to be done; make people do it or pay people to do it; and make sure that the agents of investment and implementation exist in an efficient and effective form. The investor's message is consistent: tell us what you want, make the return reasonable, and give us entities to back that we believe have the human and capital resources to implement the programme.

Matthew Knight

Director of Strategy and Government Affairs, Siemens

1 What is the priority for UK climate and energy policy in the next five years?

The UK should lead the agreement process internationally and manage decarbonisation in the most cost effective way at home. The challenge is to do the latter in a way that works and not be swayed by party politics.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Siemens would like the government to send clear, long-term signals about the future mix of generation it expects to see. When it comes to building new power plants, be they wind or gas, setting a clear direction brings cost down faster and maximises UK jobs. It can take two parliaments to develop and build a generator that will then operate for at least another five. Lack of clarity on whether funding will be available when the project is ready to build or the extent that fossil generation will have its running hours constrained by future governments pushes up the risk premium and cost of capital for everyone.

We know that there needs to be a mix of technologies and there are actually few options in the near to mid-term. The government has powers to manage that mix by adjusting the available funding for Contracts for Difference (CfDs) or the parameters of the capacity auction. In effect, government has become a central buyer of power stations. When the market hasn't delivered the right balance, governments have intervened; not directly, but by tweaking market rules. We know they will intervene again when they get the wrong answer but they refuse to say in advance what the right answer is.

A desire not to 'pick winners' has led to the official pretence that an unrealistically wide range of technological options exist and the market will decide. In fact, the market is an artificial creation and will deliver whatever it is set up to do. This lack of clear direction forces supply chain companies to think short term, making it harder to invest in things that will bring costs down. Worst of all, rather than taking on new apprentices and training them for the long term, it encourages suppliers to bring in agency staff from overseas, depriving the UK of wider industrial benefits.

We believe government should signal the build rate for each technology for the next few years. Industry will then compete to deliver the lowest cost generation of each type. This is not about setting targets or picking winners but simply recognising that, for example, we are going to need around 15GW of new offshore wind in the next decade. Telling the industry at the outset that the market will be around 1.5GW each year for a decade delivers offshore wind at a lower cost than if the government announced building 1.5GW one year, but giving no indication whether there will be more next year.

So our message to government is simple: be clearer about what you want and the industry will deliver at lower cost and with more local jobs.



Matthew Knight

Piers Guy

UK Development Director & Country Manager, Vattenfall



Piers Guy

1 What is the priority for UK climate and energy policy in the next five years?

The UK has led the world with the Climate Change Act, the joint climate change pledge between the leaders of the three main parties earlier this year and the highly competitive financial support for renewables. The challenge for the new government is to maintain the UK's position as the first stop for businesses like Vattenfall that are looking to invest and grow in renewables, particularly in wind. Political commitment and a stable regulatory framework from the new government will ensure we can continue to develop and deploy wind power cost effectively in the UK.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

First on the desk of the new Secretary of State will be preparing for Paris in December; her previous experience in the Department will be invaluable here. A close second is the need to steady the ship for the clean energy sector and set a clear direction of travel for this Parliament and beyond: this is crucial for all renewables. This is essential to build confidence for developers and the supply chain and therefore encourage investment into the 2020s after years of reform and uncertainty.

Crucial to building this confidence is visibility on the size of future budgets to support renewables, known as the Levy Control Framework, auction timings and changes to the Contracts for Difference to allow better management of contract allocation risk. A key part of the UK's regulatory framework for overseas investors also comes from the direction of travel set by existing and future carbon budgets, which

would ideally be complemented by a decarbonisation target for the power sector. A clear direction of travel will help reduce the risks attached to projects. Lower risk reduces the cost of capital for investments made by developers and the supply chain. This will support the considerable efforts already being made by developers (through economies of scale, technological improvements etc.) to reduce the cost of renewable energy technologies. The renewables sector has already made significant progress: onshore wind is on course to be operating with a low level of, in some cases, no consumer support in the early 2020s whilst offshore wind is seeing better than anticipated cost reductions and is on course to achieve a levelised cost of energy of £100 MWh by 2020.

3 How can the new government make significant progress in energy efficiency?

The new government must take care not to focus solely on renewable deployment levels to meet targets and the framework required to support and deliver this. Empowering the consumer to manage their energy use better with Demand Supply Response measures such as smart meters coupled with a smart grid and storage at scale will help to better match demand with generation and reduce overall demand. This will ensure smarter and cheaper integration of renewables into the grid.

Dame Fiona Woolf CBE

Partner, CMS Cameron McKenna and Honorary President of the Aldersgate Group

1 What is the priority for UK climate and energy policy in the next five years?

The government must intensify its international climate change diplomacy to achieve binding commitments in Paris that reflect greater ambition. As an envoy promoting the UK's expertise on 'green finance' and the low carbon economy for the past 18 months (in my role as Lord Mayor of London and since), I have stressed the leadership that the UK and the EU have shown – and that we must keep it up.

Domestically, the UK needs the tools to meet its carbon budgets on time, on budget and in a way that contributes positively to the economy. It does not cost much more (about 4.5%) to invest in health, jobs and GDP growth in a way that delivers a thriving, low carbon economy¹. The government should look at the evidence of which investments provide the greatest value for money, with energy efficiency a strong contender, while transportation currently receives the lion's share of fossil fuel subsidies and could deliver dramatic carbon savings.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The UK is a test bed for clean energy technologies, allowing us to invest to discover which will become scalable and affordable. A tiny investment in solar and onshore wind, by comparison to oil and gas exploration, has brought the costs down to such an extent that these technologies will no longer require subsidies.

The government must create a pipeline of clean energy projects, large and small, urban and national, to attract

investment in both the projects and the domestic supply chains that will create jobs and exports. This takes time (8–10 years for a large project) and time is of the essence: the risks of delay and cancellation are real deterrents. The pipeline will help the developers to attract the top talent and develop it as a world-leading resource.

Creating a stable, long-term policy and regulatory framework is a matter of urgency. Measures could include a decarbonisation target for the power sector under the Energy Act in 2016, clarifying the levels of financial support available under the Levy Control Framework and providing more clarity on the levels of deployment expected for different technologies.

3 How can the new government make significant progress in energy efficiency?

The lack of progress on energy efficiency means it must be prioritised by the next government. Buildings are responsible for 37% of all carbon emissions in the UK and yet the building insulation market contracted by 22% last year.

Reforms to the Green Deal and minimum efficiency standards for rented accommodation will be important but it would be good to focus on commercial accommodation too. There is best practice and new thinking to be shared as business becomes increasingly cost-conscious in its facilities management, with new energy-efficient technologies and optimisation programmes delivering good results.



Dame Fiona Woolf CBE

¹ » Global Commission on the Economy and Climate (September 2014) *The New Climate Economy Report*.

»» We must give investors confidence and face the fact we don't have a 'free' market. Instead we have a very expensive and controlled market. Fossil fuels are sold at a price which doesn't cover the costs they impose on the NHS, local authorities, and certainly not the horrendous cost they demand of the planet. Any fool can make a profit if he doesn't include the real cost of production««

Lord Deben, Committee on Climate Change

»» We are engaged in the most exciting industrial revolution in 150 years and on the cusp of one of the most eventful periods of human history and yet if you listened to our leaders you would never know it. All serious political leaders should present climate change and the low carbon economy as what it is – the defining issue of this, or any other, generation««

James Murray, BusinessGreen

»» The investor's message is consistent: tell us what you want, make the return reasonable, and give us entities to back that we believe have the human and capital resources to implement the programme««

**Ian Temperton,
Climate Change Capital**

»» It is vital the UK maintains its position as a world leader on climate change policy. Post-Paris, this means keeping up our global engagement on the subject and using the voice of British business to support this work««

Benet Northcote, John Lewis Partnership

Benet Northcote

Group Head of CSR, John Lewis Partnership



Benet Northcote

1 What is the priority for UK climate and energy policy in the next five years?

Clearly, it is vital the UK maintains its position as a world leader on climate change policy. Post-Paris, this means keeping up our global engagement on the subject and using the voice of British business to support this work.

Domestically, the fifth carbon budget and policies to help implement our existing carbon budgets in a timely and cost effective manner are crucial, as is increasing the focus on energy efficiency. There are tremendous efficiency gains to be had in retail, but the current policy landscape is cluttered and confusing and would benefit from rationalisation.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The costs of clean energy solutions are dropping fast as the technology develops, but reliable, long-lasting policy frameworks are still crucial to attract investment and accelerate cost reductions. Greater consistency in how schemes are implemented and how their success is appraised would help. There are too many schemes with too many overlaps in what is measured, which just makes it all more and more complex.

In addition, the government should lead by example, deploying and experimenting with technologies in their own estate. As part of this, I think they should develop a 'knowledge hub', which makes case studies and best practice information readily available. Businesses need to be prepared to share their experiences and government can help us do this more effectively.

3 How can the new government make significant progress in energy efficiency?

For buildings, they should consider developing a national buildings energy data strategy, to reduce radically the time and cost needed to collate, analyse, benchmark and share operational energy data. This will demonstrate the opportunities available from energy efficiency and create a market pull for more efficient buildings.

Display Energy Certificates, to help occupiers 'visualise' their performance, are important here. They could be evolved to help demystify energy and carbon. Think about how the automotive industry has created a framework that consumers recognise as a way of appraising different vehicles types. Government policy should help develop robust 'in-use' benchmarks to underpin fiscal incentives that would encourage occupiers to prioritise efficient buildings and to manage their use carefully.

For products used in the home, we should continue to push for higher energy standards and use data on 'actual' performance to inform this. Finally, government mustn't be afraid of talking about energy efficiency as a way of lowering bills. The Big Energy Vision, which John Lewis supports, will help consumers take control of their energy bills, cutting costs as well as carbon.

Niall Dunne

Chief Sustainability Officer, BT

1 What is the priority for UK climate and energy policy in the next five years?

It is critical that the UK stays on track to meet, and ideally exceed, decarbonisation path targets established by the Climate Change Act. That is why we would like to see the government agree the fifth carbon budget quickly and decisively.

We are also keen to see the UK government support the COP21 talks in Paris in December, so that a global agreement on carbon emissions can be reached by the end of this year. Imagine what a powerful message this would send out to global markets. They would wake up to the fact that governments around the world are taking decarbonisation incredibly seriously. We could be looking at a massive momentum swing – across a range of sectors – all keen to invest significantly in decarbonisation. Something that BT, with its low carbon products and services, has been doing for many years.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The government needs to look more closely at incentivisation if it wants to drive the uptake of renewable energy usage in the UK.

At the moment the system is too complex. The administrative burden passed on to businesses is hefty. It can also be unfair. For example, BT still pays a substantial amount of tax despite buying 100% of its UK electricity from renewable sources. The idea of labelling electricity according to its carbon content is an initiative that will add clarity to the market. It makes

sense for businesses to know what type of electricity they are paying for and using, in the same way that consumers understand a great deal about domestic appliances by looking at a sticker.

The government also needs to act decisively from the start. What we do not want is uncertainty.

3 How can the new government make significant progress in energy efficiency?

I think that BT, along with many other businesses, has a big responsibility to make sure that this government fully understands the potential of information and communications technology (ICT) and smart technologies. There are some unbelievably huge efficiencies to be realised across all sectors here, from agriculture, health, manufacturing and public services, to logistics, travel, building and energy. Interestingly, the latest report from Global e-Sustainability Initiative (GeSI), *SMARTer 2030* reveals that ICT can save nine times as much carbon as it is responsible for emitting.

The ICT sector also needs to make both central and local government more aware of how smart city solutions like smart parking, smart street lighting, even smart bins can get the best out of council resources and infrastructure. BT's smart city pilots in Milton Keynes show an exciting future with immense opportunities. However, to make progress here, government and business need to come up with innovative financing mechanisms that will pave the way for smart city initiatives to deliver long-term sustainable gains.



Niall Dunne

Robert Lambe

Managing Director, Willmott Dixon Energy Services



Robert Lambe

1 What is the priority for UK climate and energy policy in the next five years?

Improving the energy efficiency of the UK's homes should be a priority for the new government's climate and energy policy.

The UK has the coldest, draughtiest homes in Europe, responsible for over a quarter of the UK's total carbon emissions. While houses being built today are well insulated and easy to heat, most of our housing stock is old and around 80% of it will still be in use by 2050. Insulating the nation's homes is therefore essential to meeting our country's 2050 carbon emissions targets.

It is not just about carbon. Around one in five households live in fuel poverty with an estimated 8,000 people dying from cold each winter in the UK. With cold homes reckoned to cost the NHS around £1.3bn a year, improving home energy efficiency would significantly reduce the burden on NHS budgets, as well as improving the nation's energy security.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The need to decarbonise the grid is well understood but the important role for micro generation renewable energy and for renewable heat solutions should not be forgotten.

The Feed in Tariff has provided a significant boost to the Solar PV sector and the increased market demand has resulted in huge advances in the technology and a dramatic fall in costs over the past few years. The Renewable Heat Incentive is not having

quite the same impact, meaning a lack of investment in product solutions or tackling the challenges of district heating systems. A review of the barriers, challenges and incentives needed to stimulate activity, and mirror the success of the Feed in Tariff, is required to unlock this potential.

3 How can the new government make significant progress in energy efficiency?

Retrofitting individual homes in isolation is too costly to be attractive to most householders. It is only through street-by-street or neighbourhood schemes that economies of scale are possible. Government must also build market confidence as significant investment is needed for mass delivery, but engagement has been knocked – not least by the downsizing of the Energy Company Obligations in 2013.

To tackle these issues, the government must make home energy efficiency a major infrastructure priority with a programme that is sufficiently long term and ambitious to encourage industry to invest confidently. As well as helping to meet our emissions targets, this would benefit our economy by yielding £1.27 in tax revenue per £1 of government investment², creating new jobs and benefiting the health, wealth and wellbeing of local communities.

Lastly, the government should provide a framework which stimulates energy efficiency, such as through reduced stamp duty, to encourage homeowners who can afford it to make their homes more energy efficient. A clear trajectory of minimum energy efficiency standards (MEES) would be helpful too.

² » Cambridge Econometrics and Verco (October 2014) *Building the Future: The economic and fiscal impacts of making homes energy efficient.*

Jade Lewis

Advocacy Leader, Saint-Gobain UK & Ireland

1 What is the priority for UK climate and energy policy in the next five years?

The built environment must be high on the agenda for the next five years, whether it be providing efficient new homes or improving existing properties.

According to the Committee on Climate Change, the buildings sector accounts for 37% of total UK greenhouse gas emissions³. There are currently some 26 million dwellings in the UK, the vast majority of which are expected still to be standing in 2050⁴, so it is important to improve the energy efficiency performance of our current building stock if we are to meet our national emissions targets.

Equally important is ensuring that new build is as energy efficient as can be. The zero carbon policy agenda should be continued through progressive tightening of Building Regulations (Part L) and implementation of Allowable Solutions.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Strong policies and a healthy market are vital to a successful economy, with government and industry working together to give confidence to the industry to encourage investment into the UK economy. Without confidence in energy policy over the investment timeframe of a typical manufacturing facility (10–30 years), industry actors would be unable to build a case for investment⁵.

Government must build confidence for industry to encourage investment, innovation and growth, including consulting early and regularly with

industry and avoiding unplanned changes. A stable and competitive market can ultimately justify innovation of new products, accelerate cost reduction and support the UK in competing with other countries.

3 How can the new government make significant progress in energy efficiency?

Refurbishing existing buildings is one of the most cost effective means of reducing carbon emissions. Our reliance on fossil fuels as an energy source can be lowered; we can reduce the running costs of our buildings, tackle fuel poverty and improve our general health and wellbeing. Although the government has implemented various measures, the Green Deal and Energy Company Obligation (or equivalents) should be severely strengthened. Additional long-term drivers are needed to stimulate market transformation, for example the use of council tax reductions for homes with higher EPC ratings. Saint-Gobain also supports the Energy Bill Revolution's campaign for the treatment of retrofit to be a national infrastructure priority.

To tackle the barriers the UK retrofit industry faces, the government must back an 'existing building hub' to unite industry and build upon existing experience to overcome the day-to-day problems and increase quality and standards⁶.

Initiatives alone will not be enough – they need to be carefully marketed to the consumer to raise awareness of what is available and the benefits they offer. A whole-house approach is the best way to ensure buildings provide us with a comfortable, healthy habitat. That's why Saint-Gobain recently launched Multi-Comfort – a holistic



Jade Lewis

approach to encompass key areas of comfort in buildings, going beyond energy efficiency as a standalone measure.

3 » Committee on Climate Change (July 2014) *Meeting Carbon Budgets – 2014 Progress Report to Parliament*.

4 » See blog by Jonas Rooze: <http://bit.ly/1TnV4Rf> (Last accessed 19th May 2015).

5 » Construction Products Association and Saint-Gobain (November 2014) *A Study of the Factors Underpinning Investment in the Construction Products Industry*.

6 » National Energy Foundation and Energy Efficiency Partnership for Buildings, supported by Saint-Gobain (March 2014) *Breaking Barriers*.

Dr Richard Leese

Director, Energy and Climate Change, Mineral Products Association (MPA)



Dr Richard Leese

1 What is the priority for UK climate and energy policy in the next five years?

The top priority should be to put the UK on track to meet its long-term climate change goals without deindustrialisation and carbon leakage, with high emitters moving to countries with looser regulations, in the short to medium term.

Currently, UK carbon budgets can be met by offshoring UK manufacturing which is counter-intuitive to both economic growth and environmental protection. Over the course of this Parliament, UK cement producers will face higher production costs than their EU and non-EU competitors. It is imperative that the transition to a low carbon economy is managed in a manner that provides legal stability and CO₂ price predictability, ensuring a level playing field.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Support for innovation is critical. 60% of greenhouse gas (GHG) emissions from the cement manufacturing process are 'process emissions', i.e. emissions associated with the process chemistry rather than combustion. Evidence shows that a range of technologies and solutions are needed to reach deep levels of decarbonisation⁷. The breakthrough will most likely come with Carbon Capture and Storage or use (CCS/U), with MPA estimating a GHG emissions reduction of 81% by 2050 and the government agreeing the technology could be a game changer for cement.

Initial indications are that whilst CCS has some technical challenges for cement, the cost challenges are likely

to be greater. Carbon capture would most likely double the capital cost of a cement plant and significantly increase operating costs to uncompetitive levels. The new government has the chance to pioneer industrial CCS/U to help deliver on its own roadmaps and should look for innovative ways to assist us make the transition.

3 How can the new government make significant progress in energy efficiency?

All too often energy efficiency is viewed through a narrow lens, e.g. how much energy does it take to produce one tonne of cement? Such a restricted viewpoint fails to account for lifecycle energy efficiency. On average, a building will use 90% of its total consumed energy in its 'in use' phase, which means the real energy efficiency prize is tackling the 90% rather than the 10% associated with the building materials.

A huge amount of effort goes into insulating our homes to keep warm in winter; less attention has been paid to cooling even though we can expect hotter summers as a result of climate warming. By innovative design and the intelligent use of building materials that capture their natural thermal mass properties, it is possible almost to eliminate heating and cooling requirements. In some cases, it is possible to achieve negative energy costs. These solutions require a small 'investment' in carbon at the building product stage to reap the benefits for the long term. Great examples of this already exist, but we need more!

⁷ » See MPA (February 2013) *Cement 2050 Strategy* and DECC & BIS (March 2015) *Industrial Decarbonisation & Energy Efficiency Roadmaps to 2050*.

Duncan Price

Director, Sustainability, BuroHappold Engineering

1 What is the priority for UK climate and energy policy in the next five years?

Top of the list has to be leading by example in the run up to Paris. The UK must commit to strong national policies and in so doing, provide confidence to other countries that it is possible to deliver a global deal to limit climate change to no more than two degrees.

The government should designate energy efficiency as a national infrastructure priority and make sure it becomes one of the 40 projects in the £100bn budget to enable the National Infrastructure Plan. We need to recognise the multiple benefits that this can bring for the UK including jobs, growth, lower bills, improved health and energy security.

The government needs to set out a comprehensive transition plan to increase energy resilience and deliver the fourth carbon budget. This should include the respective roles for energy efficiency, low carbon electricity and low carbon heat. We need an energy policy that embraces distributed generation, demand management and storage and brings clarity of intent on e-mobility and electric heat. It should facilitate a regional approach to energy markets to strengthen devolved governance and enhance economic development.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

We need stability in deployment of incentives and advance communication over their withdrawal. We need a clear roadmap with long-term policies and appropriate milestones to provide confidence to industry, investors and project developers. This reduces

perceptions of risk, lowers the cost of capital and attracts private investment.

Early stage technologies and markets need to be pump-primed with risk capital and structural funds in order to bring about economies of scale and investment in innovation so the UK can be internationally competitive.

3 How can the new government make significant progress in energy efficiency?

Buildings should be at the heart of the government's low carbon growth strategy with policies to support zero carbon new build, highly energy efficient retrofit and community scale solutions.

The government must commit to delivering zero carbon homes from 2016 and zero carbon non-domestic buildings from 2019, ensuring new housing and non-domestic buildings are built to the highest achievable standard of energy efficiency and deliver low energy bills for families and businesses.

On retrofit, it must ensure that minimum energy efficiency standards for the private rented sector are properly enforced and strengthen, harmonise and streamline the range of policies for non-domestic buildings including the Carbon Reduction Commitment, Energy Savings Opportunity Scheme and Display Energy Certificates.

It should establish a national home improvement programme and publish a strategy to improve all low income homes to EPC Band 'C' by 2025 and bring all properties to this level by 2035. We need a comprehensive set of policy nudges, financial mechanisms and regulations specific to each housing sector to drive demand. Delivery of energy efficiency



Duncan Price

needs to go hand-in-hand with the delivery of heat networks in urban areas. Ground up regional and city energy planning offers the most effective way of de-risking projects and driving investment in integrated infrastructure.

Dr Jack Frost OBE

Director, Johnson Matthey Fuel Cells



Dr Jack Frost OBE

1 What is the priority for UK climate and energy policy in the next five years?

Attempts to address climate change by national quotas for production of greenhouse gases (GHGs) have failed to deliver tangible progress. One of the problems is the perceived damage to competitiveness of reducing emissions when competitors do not. It is time to deploy demand side measures that address the consumption of embodied GHGs. As a trading nation the UK is well placed to lead on this initiative.

Demand side measures could include global carbon pricing, but perhaps the most flexible approach would be international protocols whereby each signatory enacts laws requiring companies and public bodies to procure the lowest embodied GHG products, provided they have equivalent price, delivery and performance.

Applying such a law to both imported and local goods would mean no loss of competitiveness for the country adopting the measure and potentially some export advantage if they take a leading position in the deployment of low carbon energy. Minimising embodied GHG emissions in the supply chain, when done well, leads to innovation, lower costs and better products. This law would extend these economic and environmental benefits across the whole economy. Markets fail here because, for most products, low embodied GHGs do not provide direct benefits to the customer. It is precisely in these cases that society's agents must act for the common good.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Minimisation of embodied GHGs described above would be the single best way of promoting the deployment of low carbon energy technologies because it provides a market value that is greater than the cost of the energy.

Early stage technologies always need direct support to enter the market place in the face of conservative buyers and well-established conventional technologies. The support mechanism should focus on low carbon and energy security rather than just renewables and needs to recognise that the barriers are not merely financial: ascribing value to other benefits of low carbon technologies such as air quality must be in place.

3 How can the new government make significant progress in energy efficiency?

Energy efficiency is primarily a market question – the more expensive energy is the more efficiently it will be used. More efficient use of energy has little effect on energy demand however. Using energy is nearly always 'worth it' in terms of the benefits it provides and energy prices have to be very high indeed if the goal is to suppress demand. Since this is considered undesirable, direct interventions to encourage more efficient generation of energy are needed. There is a surprising policy gap here.

For example combined heat and power (CHP) units and especially fuel cell based CHP units use fuel 2–2.5 times more efficiently than central power stations. Support for their deployment is practically non-existent. Promoting these kinds of energy efficient technologies would improve generation efficiency and could provide a significant, largely privately financed, contribution to generating capacity quickly.

Professor Jim Watson

Director, UK Energy Research Centre

1 What is the priority for UK climate and energy policy in the next five years?

The main priority for the next five years is to ensure continued compliance with the UK's statutory climate change targets. Before the election, there was a welcome cross-party affirmation of support for the Climate Change Act. However, implementing increasingly ambitious policies to ensure that targets are met in this Parliament and beyond is likely to prove controversial. Furthermore, concerns about other energy policy goals, particularly energy security and affordability, are unlikely to go away.

Whilst some trade-offs between these goals are inevitable, energy efficiency improvements can arguably address all of them. As well as reducing emissions and the energy required to deliver the services people require, efficiency can reduce bills significantly. It is especially important that citizens in fuel poverty be early beneficiaries of the low carbon transition.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Research on cost effective ways to meet our long-term emissions targets suggests that early power sector decarbonisation is very likely to be required. Whilst it is tempting to approach power sector transformation as a giant engineering project with detailed targets and timetables for each technology, this has significant risks.

We don't know which low carbon technologies will turn out to be cheapest and whether projected cost reductions will be achieved. Furthermore, new business models

and innovations in areas like demand side management, smarter networks and storage could be stifled by an overly prescriptive approach.

As the Committee on Climate Change has argued⁸, a power sector decarbonisation target for 2030 would provide a good overall incentive for the changes required. Whilst the Conservative party manifesto stated that they 'will not support additional distorting and expensive power sector targets', a broad based target would allow significant flexibility about how it could be achieved. In addition, more certainty about the future of the Levy Control Framework (LCF) is likely to be needed. Investors will soon be making decisions about large-scale power projects that will be commissioned beyond 2020, when the current agreement concerning the LCF expires.

3 How can the new government make significant progress in energy efficiency?

Energy efficiency in households has lost momentum recently, and the Green Deal has failed to deliver what it promised. Recent UKERC research⁹ suggests how this momentum can be regained: for example, through focusing the Energy Company Obligation on low cost measures such as cavity wall insulation and by reforming the Green Deal so that it can finance more expensive energy efficiency measures – albeit with a lower interest rate.

It will be important for the government to engage the public about how this transition should be achieved. This means ensuring that responsibilities are shared equitably between government, industry and citizens – and that any benefits are shared as widely as possible.



Professor Jim Watson

⁸ » For example, see Committee on Climate Change (December 2014) *Energy prices and bills – impacts of meeting carbon budgets*.

⁹ » Jan Rosenow and Nick Eyre (2014) 'Residential energy efficiency programmes in the UK: a roadmap for recovery.' 10th BIEE Academic Conference, Oxford, 17–18 Sept; <http://bit.ly/1JQ5QwB>

Dr Bridget Woodman

Director MSc Energy Policy, University of Exeter



Dr Bridget Woodman

University of Exeter

1 What is the priority for UK climate and energy policy in the next five years?

The immediate priority is to demonstrate the UK's leadership on climate issues at the Paris COP, to ensure a long-term global plan of action to control and reduce greenhouse gas emissions is agreed. As part of this, the UK should also be more positive in discussions at EU level about energy and climate targets for 2030 and even beyond. If the UK is to meet its own 2020 and 2050 targets, investors will need the certainty that can be delivered by clear long-term commitments.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Renewables costs have fallen dramatically as deployment levels have risen, but clean energy technologies are still new and still need some subsidy to compete with conventional technologies. If investors are confident that they will receive adequate support to see a return on their investment then they will continue to deploy more renewables, and we can expect to see the prices reduce further.

The level of subsidy given to renewables is very transparent. This is desirable, but it makes the subsidies an easy target for the public and politicians to complain about, in comparison to the opaqueness of subsidies given to fossil fuels or nuclear power.

The Levy Control Framework (LCF) is meant to manage the impact of renewables development on energy bills. However, imposing constraints on spending leaves investors uncertain of returns on their risky investment. Extending the LCF is probably

inevitable, but the levels set need to reflect our desire to reduce our carbon emissions, not short term political concerns about the wider debate on energy bills. The government should act to protect vulnerable customers from increased costs, but doing it by being too cautious about the expansion of clean energy is throwing the baby out with the bathwater.

3 How can the new government make significant progress in energy efficiency?

The coalition government missed some real opportunities to drive forward improvements in the energy efficiency of the existing housing stock. They introduced weak efficiency requirements on private landlords and cut subsidies to the main energy efficiency support policy, the Energy Company Obligation.

Energy efficiency has been framed as an unnecessary additional cost, when in fact it is an opportunity to create jobs (particularly in the SME sector), improve living standards, and combat fuel poverty as well as cutting emissions. More demanding regulations could significantly improve energy performance of our existing, very leaky housing stock and in so doing, improve the lives of millions. That said, much of the policy on energy efficiency has concentrated primarily on households, leaving scope for improved efficiency at the industrial level.

More broadly, Electricity Market Reform has introduced mechanisms to allow the demand side to participate in the electricity market, for example by reducing demand at certain times in return for payment. These measures should be expanded with the aim of creating a more flexible electricity system and reducing the need for some infrastructure investments.

David Nussbaum

Chief Executive, WWF-UK

1 What is the priority for UK climate and energy policy in the next five years?

In February, the Prime Minister signed a pledge which identified action on climate change as key for the UK economy. This declaration committed the new government to pushing for a legally binding global climate deal; setting ambitious UK carbon budgets; and driving the decarbonisation of the economy.

These are the right priorities, but we need specific plans for emissions reductions – not least the passing of a strong fifth carbon budget before the summer of 2016. The government must set out the mechanisms through which its long-term vision will be achieved and stick to them to encourage investment, give confidence to international investors and financial markets and to provide a stable environment for low carbon businesses.

At the international level, the UK should push for an EU target stronger than the proposed 40% reduction in emissions; engage with the EU 2030 Climate & Energy package; and show leadership as part of the EU 'block' at the Paris COP in December.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

There are three priorities. The strike prices for clean technologies under the first Contracts for Difference allocation show the impressive cost-reduction potential of clean tech when it receives the right signals from government. However, policy must better differentiate support for the innovation and commercialisation chains. R&D and capital funding are vital to emerging

technologies, whereas for more established technologies support should take the form of ensuring markets are compatible with them (e.g. Electricity Market Reform).

To boost confidence in the long term, government should make progress towards a carbon free power system by 2030; starting with the phase out of coal generation before 2025. The new Energy Secretary should look again at the Capacity Market, Carbon Capture and Storage and carbon pricing; all of which need review or further clarity.

The Heat Strategy foresees a significant role for electrified renewable heat as the cost effective route to reduce the circa 40% of emissions which come from our buildings. Government must continue initiatives like the Renewable Heat Incentive, which aim to create market volume for key technologies. .

3 How can the new government make significant progress in energy efficiency?

At the heart of this challenge is market failure. Energy efficiency offers consumers short payback periods and gives government a GDP return for any investment through energy savings and distributed benefits. The Committee on Climate Change has recommended government accelerate its ambition for deployment – and for this reason calls to make building energy efficiency a national infrastructure priority, and to finance grants and zero interest loans to overcome a lack of capital, are both appropriate and welcome.

However, progress is being impeded by the absence of sufficient consumer demand due to a lack of information and the perceived hassle of making improvements. Adjustments to stamp



David Nussbaum

duty and/or council tax rates could act as a 'nudge', but regulation in the form of minimum standards across tenures and types of building would underpin progress at pace.

Audrey Gallacher

Director of Energy, Citizens Advice



Audrey Gallacher

1 What is the priority for UK climate and energy policy in the next five years?

The biggest issue, due to the direct impact on consumers, is affordability. It is also the one that probably gets the lowest billing in the 'energy trilemma' debate and resultant policy response. That must change. We support the UK's climate targets but the new government must quickly grasp the vital role the demand side can and should play in the delivery of these targets. We have a decarbonisation programme that fails to focus on the most cost effective measures, particularly energy efficiency. Consumers have faced escalating prices in the context of an energy market that is not trusted and does not appear to be operating competitively. There are also narrowing generation margins that raise questions about security of supply. Energy policy must prioritise enduring solutions in the market and provide a framework that helps consumers take control of their energy so that they use less, waste less and pay less.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The government should extend the use of auctions and competitive tendering to ensure that the most cost effective low carbon solutions are brought forward, and that consumers pay no more than necessary as we decarbonise our energy system.

3 How can the new government make significant progress in energy efficiency?

The government needs to see the relevance of energy efficiency across departments and encourage integration with housing, health, employment

and income policies to benefit all consumers and taxpayers.

Other priorities:

Engage consumers. The Green Deal and Energy Company Obligation (ECO) are too complex, do not necessarily offer a good deal and have failed to capture consumer interest. The government needs to make home energy efficiency a national infrastructure priority, enabling fair competition for public and private investment and the communication of a long-term vision to the public. This could be further encouraged through public funding in recognition of the social benefits of energy efficiency, and to correct the regressive nature of ECO funding; a genuine and enforceable minimum energy efficiency standard for private rental homes; zero or low interest loans; and the embedding of value of energy efficiency in the housing market through fiscal incentives.

Local delivery. There is a strong case to move responsibility for energy efficiency programmes from energy companies to local agencies, who know their housing stock and residents. This could also prompt further exploration on how agencies can be incentivised to lever in funds from other sources, such as public health, economic development and regeneration funds.

Smart meter rollout. Energy companies are developing their plans for the installation of smart meters and are looking at how to help vulnerable consumers benefit. The problem is the industry identifies vulnerability in terms of people, particularly health and disabilities, not their homes and appliances; but we know that hard-to-heat homes are a major cause of high bills and poor health. This looks like it will be a significant missed opportunity.

Nick Mabey

Chief Executive, E3G

1 What is the priority for UK climate and energy policy in the next five years?

The single arena where this government can have the greatest impact is on the international stage but to maintain influence it needs to walk the talk domestically.

David Cameron must keep the UK in the EU. If the UK votes to leave the EU, then UK clean energy investment will stall, UK climate policy will be attacked on competitiveness grounds and EU influence on global climate politics will be greatly diminished.

We need an ambitious Paris Climate Agreement in 2015 which signals to investors a pathway to zero global emissions, followed by investment in the diplomacy to increase global mitigation commitments when they are reviewed in 2020 to make them consistent with a below 2C emissions pathway.

The UK should take a proactive role in shaping the EU Energy Union, with energy efficiency as the 'first fuel' for Europe. The Energy Union governance process should be used to ensure other EU countries follow the UK in developing transparent 2050 decarbonisation pathways.

The UK should influence the EU's Capital Markets Union (CMU) to ensure investors assess the climate change risks inherent in different investments and support EU wide markets in instruments such as green bonds.

At home the UK must ensure that the Spending Review provides adequate funding to keep the UK on a credible pathway to its legally binding carbon budgets. UK and English devolution should be used to drive maximum

transfer of powers over infrastructure, energy and climate resilience to local levels. National resilience should be improved by giving Cabinet Office responsibility for ensuring climate risks are incorporated into all infrastructure spending.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

The government can reduce electricity costs by building a North Western European 'electricity free trade area' supported by a meshed North Seas grid system. Clean technology costs can be reduced by prioritising the liberalisation of clean energy goods, services and investment markets through agreements such as TTIP and the EU-China investment agreement.

Domestically, new markets in demand reduction and management must be incentivised by completing demand side changes to Electricity Market Reform and continuing to support low cost onshore wind. Incentives for broader based community benefits and ownership should be supported by the Green Investment Bank (GIB), which should remain majority owned by government to ensure continued investor confidence in the low carbon sector.

3 How can the new government make significant progress in energy efficiency?

Energy efficiency must become a real infrastructure priority, with a zero-based review of the UK Infrastructure Plan which transparently ranks the economic benefits of a major energy efficiency retrofit programme against other projects.



Nick Mabey

The GIB must be permitted to borrow to support efficiency programmes in public buildings, local authorities and social housing, supported by the European Fund for Strategic Investment to access low cost financing.

Lastly, this government should establish an Independent System Operator for the electricity system with a duty to deliver a least cost decarbonised energy system and create a truly level playing field between demand, supply, infrastructure and storage options.



James Murray

1 What is the priority for UK climate and energy policy in the next five years?

Selecting a single priority for the next five years is impossible. The inter-related nature of so many policies means an inability to deliver a coherent strategy will guarantee failure almost as completely as if you only deliver a couple of flagship climate policies. It is all or nothing.

So the priorities for the next parliament include delivering new carbon budgets, a decarbonisation strategy for the power sector and the funding to support both through a new Levy Control Framework settlement; a comprehensive overhaul of faltering energy efficiency strategies for domestic, commercial, and industrial sites; urgent reform of the EU emissions trading scheme; a strengthening of the UK's climate resilience; a significant increase in clean tech research and development; the introduction of credible strategies for decarbonising heat and transport; and the delivery of an international climate change deal.

2 What should the new government do to help accelerate cost reduction and deployment of clean energy technologies?

Some of the priorities for the next five years were actually priorities that the 'greenest government ever' never delivered and now need resolving, ideally within weeks. Consequently, you could make a compelling case that the priority is to sort out the impasse over new nuclear reactors, or dish out Carbon Capture and Storage funding, or resolve the looming crisis for the energy efficiency sector as firms meet their Energy Company Obligation requirements early.

The reality is that every single one of these challenges should be treated as a priority because failure to deliver on them would compromise the UK's wider climate strategy and undermine the burgeoning low carbon economy that is driving decarbonisation efforts. In some of these areas, such as power sector decarbonisation, it is simply a case of Ministers having the political nerve to deliver on the strategy and targets that are already in place and have been endorsed by the independent Committee on Climate Change.

3 How can the new government make significant progress in energy efficiency?

When it comes to energy efficiency, a major overhaul is needed based on much tougher standards and a laser-like focus on cost effectiveness. There also needs to be a serious assessment of how to ensure the short-term costs of investing in decarbonisation do not fall heaviest on the poorest in society. Progressive environmental taxation has to be put on the agenda at some point.

But the biggest change needs to come not in the policy framework, but in the way it is presented to the public. For too long, politicians have undersold both the benefits of climate action and the risks of inaction. We are engaged in the most exciting industrial revolution in 150 years and on the cusp of one of the most eventful periods of human history and yet if you listened to our leaders you would never know it. All serious political leaders should present climate change and the low carbon economy as what it is – the defining issue of this, or any other, generation.



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