UK Government's Energy Review:

'Our Energy Challenge'

The Business Council's Response

12 April 2006

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Overview

The UK Business Council for Sustainable Energy brings together the Chief Executives of the UK's major energy companies.[1] We work to support the fastest transition possible towards a sustainable energy economy consistent with the delivery of a secure and reliable energy infrastructure.

The Council believes that options do exist to deliver on the UK Government's goals of both reducing carbon emissions and ensuring security of supplies. Specifically these include strong and sustained carbon price signals, realistic and ambitious energy efficiency policies, the further development of new energy technologies such as renewables and carbon capture and storage, and where appropriate, enabling more decentralised energy systems.

The Council also believes that the liberalised and competitive market remains the most efficient and effective means of delivering these goals.

However, such market frameworks do not exist in a policy or political vacuum. Across the energy sector, such markets are typically created by the result of statutory action that reflects the political circumstances at the time. The Energy Review is therefore an opportunity to further develop a clear, long-term and stable policy framework that builds on the market-based approach. Importantly, however, this must be underpinned by a renewed political commitment to maintaining and supporting that approach.

Finally, to underpin this, we believe that a separate and focussed set of policies must be in place to increase access to affordable energy. The Government has a lead role to play, particular by ensuring it maintains its current actions to lift more households out of poverty and also that adequate investment is made in improving the energy efficiency of the homes of lower income households. Then, in partnership with Government, the Industry and other stakeholders are well placed to deliver a range of supporting measures.

Development of a Routemap

We need to maintain the direction and vision that the 2003 Energy White Paper set towards at least a 60% reduction in CO_2 by 2050. Important policy decisions therefore do need to be made. Equally as important as the nature of those decisions is their timing. Throughout this submission the Council's view is that certain areas of policy need to be clarified *now*, whereas others depend on the evolving broader context of policy and technology innovations.

The Council believes that in order to provide tangible clarity over the future policy direction, and to enhance investor confidence, a clear and consistent 'routemap' is now needed.

[1] The Council brings together the Chief Executives of Scottish & Southern Energy plc, E.ON UK, EDF Energy, Scottish Power, National Grid, RWE npower, British Gas and United Utilities.

This routemap would outline the critical pathways to the UK's energy goals in a number of key policy areas. It would include long-term goals and interim milestones, and would benchmark progress, identifying key points at which decisions may need to be made or reviewed.

The points on this routemap would be dependent on a number of features such as developments in the EU and international policy context, including in climate policy. It would take account of the different phases of any gap between forecast demand and the availability of supply. This would reflect the lead-time for the lessons from trials and demonstration phases with new technologies and, on the demand side, of new policy approaches and, when appropriate, the construction of new generation and infrastructure.

Some of the critical pathways that would be included in the routemap would be:

- Steps to removing barriers to investment in a range of technologies and energy systems;
- Action to ensure the development of a credible EU ETS framework post-2012;
- The development of an effective energy demand reduction policy;
- Action to tackle fuel poverty though innovative policies and enhanced resources; and
- Measurable progress in reducing emissions through heat and transport policy.

In order to deliver the investor confidence necessary to shift the market towards achieving the Government's energy goals, it is vital that the routemap becomes the basis for forming the delivery of policy in a consistent and reasonably predictable way. In this way, both Government and the Industry can develop track records which both can then have confidence in, and on which to then make key strategic decisions.

The Council's Submission

The UK Business Council for Sustainable Energy has submitted seven detailed papers to the Energy Review, which represent the common view of the Council's members. Each of those papers has a series of recommendations that must be seen both as specific to that paper, and within the context of the broader 'routemap'.

The seven areas are:

- Carbon Markets and Mechanisms;
- Improving access to affordable energy;
- Delivering the step change in Energy Efficiency;
- Investment and Generation Capacity;
- Gas Markets and Flexibilities;
- Carbon Capture and Storage; and
- Networks.

Across these seven areas, a number of overarching themes emerged, and these are outlined below:

- The Government should maintain the long-term shift towards an over-arching emissions strategy, which ensures all consumers and sectors are aware of, and able to react to, carbon price signals.

- The Government needs to develop significant new policy approaches for heat and transport and should explore demand reduction options to speed up the move to less carbon intensive sources in both of these areas. Adopting alternative, and sustainable heating options for the domestic and industrial sectors will deliver greater diversity and security for the wider energy market, particularly when set in the context of an enhanced level of demand reduction.

- It is important to see better alignment between regulation and policy. Specifically this will mean not only giving clear and resolute guidance on priorities to Ofgem and other regulatory agencies, so as to ensure that public policy objectives are being delivered in the competitive market. Consideration needs to be given to given to also revisiting the statutory basis for such regulation in order to ensure it is fit for purpose in a carbon constrained world where the focus will increasingly be on measures that actually reduce carbon emissions as well as security of supply and competition

- The Council also believes that there will be existing and emerging technologies which, for a variety of reasons, are not likely to prosper in today's energy market. Capital funding will be needed and we believe that a potential source of revenue for this could be by recycling the revenues that will arise from the auctioning mechanisms likely to emerge in future phases of the EU ETS.

- Planning and consent issues remain a major challenge to new energy projects. This concerns generation projects (be they conventional thermal, nuclear, wind, or CCS plant), and energy infrastructure, including transmission and distribution, and, gas pipelines and storage facilities. A more robust framework for the inquiry and consent process is needed, capable of ensuring scrutiny of all material issues, but enabling effective separation of national policy and generic matters from consideration of local site-specific issues. Uncertainty and long-time scales associated with the planning process can needlessly push up costs and could put timely delivery of essential projects at risk. A more sophisticated approach by both industry and Government is clearly needed.

- We believe there is a strong opportunity for Local Authorities to become key actors in energy policy. In the areas of planning, tackling fuel poverty, energy efficiency, and managing more decentralised energy systems Local Authorities can have an important role, which must be explored and mapped out.

- Public procurement needs to move in the same direction as policy. There are a number of opportunities for the public sector to use procurement as an important lever in energy policy. These include enabling the market transformation of sustainable energy technologies and energy efficient appliances; performing energy efficiency audits on all new investments; kick-starting the market for energy services; and experimenting with new policy mechanisms such as a demand-side cap and trade system for the broader Government estate

- Similarly, there is a pivotal role for Government in setting the market conditions that will enable the transition to a low-carbon economy. These include ensuring robust and properly enforced Building Regulations that follow the direction of a stretching and ambitious Code for Sustainable Buildings and similarly, setting bold energy efficiency standards for electrical goods and appliances. The Government must also take steps to enable 'customer pull' by setting out an ambitious and integrated series of fiscal measures. This could include rebates against personal taxation, Council Tax rebates for energy efficient properties, reduced Stamp Duty for homes that are deemed to be energy efficient at the point of sale, and greater VAT differentials. All this would enable the more rapid uptake of demand side technologies and services.

We believe the Energy Review offers an important opportunity to set key directions in all these areas.

Conclusion

The UK's future energy systems and technologies have the potential to be quite different from those we know today. The same is true for the energy companies and the role of Government and the Regulator that set the market context in which they operate.

To achieve this we need a clear and effective *delivery routemap* towards the UK's energy policy goals, this will help enable energy companies to respond to long-term signals and deliver on them. Underpinning this, an effective and enduring partnership will be needed. In this way, the routemap would help identify and develop the interdependent roles of the state and the market in defining and delivering energy policy.

With this, both Government and the Industry can be confident about the delivery of not only significant carbon reduction, but also a secure, sustainable and consumer focussed energy market.

I Carbon Markets & Mechanisms

Energy Review Question: What more can the Government do on the supply side for energy to ensure that the UK's long-term goal of reducing carbon emissions is met?

Context

In order to make effective long-term investment decisions in generating plant, companies need a long term, stable regulatory framework. Currently, there is no clear framework for valuing carbon post-2012. The Council believes the EU ETS is the best vehicle to provide a value for carbon.

In the event that EU ETS Phase III does not occur, then low carbon investment will not emerge without some other form of low-carbon incentive. The Council would then expect to work with Government to ensure such an incentive delivers at the most efficient cost.

Recommendations

In order to improve the investment climate relating to carbon we believe action is needed in the following areas:

- *Demonstrating commitment:* The Government can demonstrate its commitment to EU ETS by establishing its own proposals for the parameters of Phase 3 and actively pursuing them, with a view to securing early agreement, at international fora such as:
  - EU Energy Council and European Council
  - Trilateral commitment from France, Germany & UK leaders
  - International Climate Change negotiations

  In addition, demonstrating a consistent approach between phases will enhance the credibility of its commitments.

- *Improving process transparency:* In addition to setting out its views on overarching parameters of the scheme, the Government can improve the clarity of the investment climate by setting out *now* its preferences for those parameters over which it has most control namely:
  - National sectoral allowances (especially generation)
  - Installation allowances
  - Rules for closing installations
  - Rules for new installations
  - Extent of auctioning.

- *Devising methods of protection:* The investment climate would be improved if the Government establishes arrangements to "insure" energy companies against the risk that carbon arrangements deviate from its intentions. Companies' views differ on what is required. The importance of such arrangements to the viability of different technologies varies.

- *Affordability:* The Government's proposals for improving certainty and providing protection should be credible.

EU ETS Phase III

The trajectory towards a low-carbon economy will require an over-arching emissions strategy, which exposes all consumers and sectors to carbon price signals. We welcome the Chancellor's reference to EU ETS in the 2006 Budget statement and repeated references from the Prime Minister. The Council believes that the EU and the UK should continue to take the lead in developing the international policy framework to tackle climate change. We therefore urge the UK Government to continue and increase pressure to provide earliest possible adoption of a framework for Phase III across the EU, working with other Member States to build a consensus around predictable outcomes for Phase III and beyond.

Below are what the Council believes should be the key principles for an EU ETS Phase III framework:

- In order to deliver a fair and effective distribution of the burden, it is important that:
  - The EU ETS is linked to other equivalently robust international trading arrangements;
  - Other significant developed producers of emissions commit to binding carbon reductions or programmes that will have that effect;
  - Effective techniques, including developing further the linking of JI and CDM to EU ETS, are taken forward to facilitate the implementation of low carbon techniques in industrialising nations;
  - All practical means of extending the scope of EU ETS as widely as possible should be explored in a robust manner (see below).

- Confirmation that as many sectors as possible will be included in Phase III in addition to the generation sector, with allowances determined equitably and the total reasonably aligned with total potential. The inclusion of more sectors should increase the potential for the scheme to achieve reductions as well as maximising the likelihood of trading reducing emissions. In considering the above issues, the principles of adequacy and proportionality need to be considered, and maximum innovation needs to be applied. For sectors that cannot be included within a broadened ETS, other routes to emissions reductions should be developed as part of an overall EU Emissions Strategy where it is clear what proportion of the overall target ETS is expected to achieve.

- The duration of Phase III should better relate to the life cycle of generation assets. This should be at least 10 and preferably 15 years. Within this, settlement periods could have a shorter duration.

- Phase III must be designed with sufficient tightness. As noted in the discussion paper by the Stern Review (31 Jan 06 para 82), private companies need clear, long-term and credible signals to guide decisions. They can then deliver efficient investments to achieve a stable climate. If

carbon allocations were known to be progressively reducing over a prolonged period, one would expect the price of carbon to tend towards the marginal cost of abatement.

- EU Heads of State and Government on 23 March 2005 agreed that a 15-30% cut in greenhouse gas emissions "should be considered" for 2020 "and beyond, in the spirit of the conclusions of the Environment Council" earlier that month. This would provide an appropriate basis to confirm the principles of Phase III. We would urge the Government to seek for a trilateral statement with France, Germany to support such commitments.

- UK Government to consider providing arrangements to limit the risk that Phase III does not proceed.

  Companies expect to make projections regarding fuel and capital costs, projecting the supply and demand of resources generally and taking the associated risk. The distinguishing feature of the cost of carbon, compared to other commodities, is that it is still an emerging market largely determined through a political process. In particular, under the EU ETS, the total supply of carbon rights is determined by the EU whilst the allocation of supply to UK installations is determined by the UK Government. Any company which attempts to anticipate the political judgements which will be made on these points risks incurring exposure. There is a real option value in waiting until decisions have been clarified. However, some 20GW or more of investment is required by 2020; replacement investment decisions may need to be made before Phase III is drafted.

  There is a risk that Phase III may not be confirmed until 2010/11. This imposes a level of uncertainty on the cost structure of competing generation technologies which might result in investment patterns which are inconsistent with carbon reduction targets. The challenge for the UK Government is to get targets agreed early on an EU-wide basis or provide investors now with some form of arrangement which would apply to the bridging period until Phase III is confirmed.

  Companies have different views on the form of protection and the costs to which it would apply in the event that Phase III failed to go ahead.

  Options would include:
  - Initiatives to limit the development costs incurred during the bridging period
  - Indemnification of development costs incurred during the bridging period
  - Minimum guarantee of the carbon price.

  The more strongly Government demonstrates its commitment to an effective Phase III, the less companies are likely to seek specific alternative arrangements.

- A degree of alignment, transparency of approach and timeliness in the implementation of successive NAP periods to create the stable and

predictable track record required for the long-term confidence of investors in generating assets.

- Providing continuity and consistency between Phases will increase the confidence of the sector to invest. An essential element of continuity is the availability of banking between Phases.

- To further improve investor confidence, a long-term track for carbon reductions particularly for the UK generation sector (and preferably its views on targets for other UK sectors and total EU limits) out to 2050 with intermediate milestones at 2012 and 2020. The confidence of the UK generation sector to invest will be substantially enhanced if the Government establishes, promulgates and promotes these targets both within the UK and within Europe. We recognise that the Government cannot independently determine EU and UK totals.

- The long-term track should reflect the ability to achieve reductions and one that applies a consistent and stable methodology.

II Improving access to affordable energy

Energy Review Question: What further steps should be taken towards meeting the Government's goals for ensuring that every home is adequately and affordably heated?

Context

It is imperative that effective policies are in place to support those in poverty who spend a disproportionate amount of their income on their energy bills.

This means ensuring that polices are in place to secure warm, dry, homes through investment in efficient heating systems, well-insulated buildings and the broad suite of measures available, as well as well -focused income maintenance polices. The energy industry and others can then support these with the delivery of a range of other measures.

In partnership with the Industry, the Government has made considerable progress towards the Government's statutory target to eliminate fuel poverty by 2016 in England and Scotland, and by 2018 in Wales. However, these targets were set at a time when prices were low and falling.

The challenge now is to have both short-term actions to address the current situation of rising energy prices and uncertainty over supply, but also innovative policies that can adapt to longer-term trends.

These policies also need to reflect changing demographics with an increasing number of the population over 70 years of age. Alongside this, environmental costs are increasingly being internalised in the energy market, and technological change is driving the potential deployment of new, more localised energy technologies and smarter metering.

In response to these global and national trends, policies need to be comprehensive and cross-departmental. The Government's fuel poverty strategy to 2018 needs to engage the full range of Government Departments that have a role to play (e.g. DTI, DEFRA, DWP, DOH, ODPM, the Treasury and the Devolved Administrations). It should also utilise the Government's own knowledge of deprived communities to target those on low incomes, in poor quality housing and claiming benefits.

For its part the Industry is committed to supporting vulnerable customers and will continue to invest in social programmes. However, these will not 'cure' fuel poverty. Rather a new and more vigorous cross-Governmental partnership is needed. This paper outlines what the components of such a strategy might be.

Recommendations

We need new and creative measures that will secure early investment in warmer homes for those who are at risk from the cold, and for whom rising energy prices have a disproportionate impact.

The Council will be taking forward discussions with various stakeholders to see if the potential exists to develop an innovative vehicle that would involve front-loading significant capital investment for securing longer term energy efficiency improvements to the homes of those who are prone to fuel poverty. Revenue payments to support this might be guaranteed through a combination of existing fuel poverty and other funding programmes. This approach could potentially harness contributions from Government, construction industry and upstream energy sector, with local authorities and housing associations as the key delivery vehicles.

We also need to recognise that bringing power, and particularly heat, closer to the people can have a beneficial effect in alleviating fuel poverty. The Government's Fuel Poverty Advisory Group has already highlighted that many 'hard to treat' homes can only be lifted out of fuel poverty by the innovative delivery of local energy services. Underpinning the Council's commitment to developing longer term and innovative ways of securing greater access to affordable energy for lower income households, the Council believes that:

- The Government clearly has the lead role in tackling fuel poverty. This involves Government driving investment in improving the housing stock as well as widening the eligibility criteria for specific schemes such as Warm Deal. It also means defining effective criteria for identifying fuel poor households, sharing and pooling data with energy suppliers as well as sustaining improvement in benefits and their take up etc. *To reinforce this we believe that tackling fuel poverty should be a PSA target shared across the DTI, DEFRA, DWP and ODPM.*

- Fuel poverty is a social issue and requires a separate and precise policy approach. The Council's members believe that in order to secure a more effective drive both towards carbon reductions and to lift more households out of fuel poverty we need to separate the current twin goals of the current Energy Efficiency Commitment (EEC) which seeks to focus on both simultaneously. This current approach leads to conflicting priorities that are reducing the ability of the industry to do as much in either area as is both needed and expected.

- There are a number of funding streams currently aimed at tackling fuel poverty. These include the Warm Front programme, the Winter Fuel Payments, some of the current EEC programme, and other channels. *The funding available to tackle fuel poverty needs to be both more focussed and delivered effectively.*

- This funding must then be deployed in an integrated and managed way. There is no single solution to what is a complex social and poverty-related issue. Different situations, such as the social housing stock, houses with

multiple occupancy, different social groups, will require different approaches. Options available range from insulating homes to income support to microgeneration technologies to community energy schemes.

To ensure the effective delivery of this funding, Government needs to 'play to the strengths' of local authorities, energy suppliers, NGOs and other organisations to enable a variety of approaches. These must then be applied in an integrated and comprehensive way underpinned by incentives appropriate to each area.

- Targeting support to those who are most vulnerable is vital, as is linking this with broader poverty-reduction tools such as benefits health checks.

- Government needs to ensure that when it invests in improvements to the social housing stock, such as with the development of Arms Length Management Organisations (ALMOs) then it uses this process to invest in lifting more households out of fuel poverty. Already, in some cases, the ODPM has agreed housing improvement strategies that can deliver the energy element with only minimal (if any) improvements of the heating and energy efficiency of the properties concerned. This represents a missed opportunity to lift affected households out of fuel poverty, and does little to achieve the longer term access to affordable energy that the Government itself seeks.

- Demonstration projects tackling fuel poverty, while often successful, have rarely been replicated.[2] Learning from and building on these experiences will be essential. We therefore recommend the development of a virtual database of all the fuel poverty programmes, pilot projects and case studies available, so that these may be shared and utilised.

Specific Policy Options

To complement this more integrated approach, there is a range of new ideas, which the Council members believe should be considered as options for tackling fuel poverty. These include:

- *Government Benefit Health Check (BHC):* Government to identify all potential fuel poor households and then undertake a BHC as a matter of priority.

- *Local Authorities Annual Fuel Poverty Reporting*: All UK LA's should be enabled to follow the Scottish example of reporting annually to Government on work undertaken specifically to eradiate fuel poverty with targets attached and performance assessed

[2] A recent study revisited a pilot project in Easthall in Glasgow from 10 years ago and reported that amongst other things households continued to spend less that £5 per week on fuel, and irrespective of circumstances and life changing events families were not in fuel poverty nor likely to be. 'Revisiting Easthall: 10 years on', Energy Action Scotland, 2002.
See also details of the Barkantine CHP scheme at www.edferengy.com, and also the Aberdeen Heat and Power Scheme at www.chpa.co.uk

- *Re-thinking Fuel Direct:* this could take one or more of the following forms:
  - New Services under Fuel Direct: Expand Fuel Direct by offering EEC services, benefits health checks and assistance when coming off Fuel Direct to help households avoid further fuel debt and provide information on tariffs and energy advice.
  - Fuel Direct Discount: Discounted fuel where payment is via Fuel Direct.
  - Expanding Eligibility of Fuel Direct by enhancing the number of qualifying households.
  - Direct Debit Rates: DWP identify fuel poor. Once identified suppliers can offer competitive rates.

- *Winter Fuel Payments:* Winter Fuel Payments are an important part of the mix of measures needed to lift those pensioner households who are vulnerable to fuel poverty out of fuel poverty. However, their impact in doing this could potentially be better achieved if at least an equivalent amount of funding was directed towards long-term improvements in the same household's energy efficiency.

- *Fuel Allowance:* Weekly allowance paid by Government to fuel poor households with eligibility wider than just those on benefits e.g. single occupancy households, disabled, young children etc.

- *Bill Credit:* A credit applied to energy bills of identified vulnerable households. This could in part be funded by up to 5% of EEC spend on a national basis, with appropriate safeguards and measurement of credits towards the EEC target.

Taking the agenda forward

The Council has welcomed the renewed focus from HM Treasury, the DTI and Defra, in this area.

We do not intend that the Council's role in this area will cease with the Energy Review.

There is clear responsibility upon the Industry to come forward with new and creative ways of tackling fuel poverty that build on the options outlined in this note. That is what we intend to do, and we have already indicated above some of the approaches that might be considered.

We will now be initiating further work, in partnership with Government and other stakeholders, to set out how, together, we secure a step change in the action that needs to be taken to address fuel poverty.

III Delivering the step change in Energy Efficiency

Energy Review Question: What more could the Government do on the demand side for energy to ensure the UK's long-term goal of reducing carbon emissions is met?

Context

Energy efficiency remains the 'cheapest, cleanest and safest way' of achieving all the UK's four key energy policy objectives.[3] It must therefore continue to play a key role in tackling our energy challenge.

In order to do so, the Council believes we need a realistic assessment of what can be delivered and at what rate. We must then separate, clarify and focus the policy objectives towards delivering this potential in an ambitious, practical and sustained way. We believe that tackling fuel poverty is a distinct issue in itself, and requires a separate policy approach to energy efficiency.

Overall there is a need to develop a more comprehensive approach making existing measures more effective and developing new measures across the full spectrum of opportunities.

A key element of that approach must be one of enabling 'customer pull' for energy efficiency. This means an integrated programme that must include strong fiscal incentives, support for new demand-side technologies, and tough appliance standards and building regulations.

Another, linked element to this approach, is enabling suppliers to develop new and innovative energy efficiency offerings. Suppliers will need greater flexibility in order to experiment, innovate and compete for better solutions. From this we can then learn which policies and measures can deliver significant, long-term, demand reductions. We believe it would then be possible to move beyond the current regulatory approach of EEC to a proper business model that is consistent with the competitive market *and* encourages demand reduction.

We believe that appropriate mechanisms and signals that work with the flow of the market can deliver demand reduction. The current and next phase of EEC must be seen as a gateway to achieving a clear understanding what levers and incentives are best placed to enable this. We would therefore recommend the development of a co-ordinated and realistic action plan that sets out a clear roadmap to the goal of demand reduction.

[3] *Energy White Paper: Our energy future – creating a low carbon economy'*, DTI, 2003

Recommendations

A Comprehensive Approach

We need to develop a comprehensive approach to energy efficiency that not only focuses on demand reduction, but which also is comprehensive and cross-sectoral. This means both making existing measures more effective, as well as focussing on new measures.

Such a comprehensive approach could, for example, include:

- Strong fiscal incentives to enable customer pull for energy efficiency, such as allowances against income tax, stamp duty, council tax, VAT variations for energy efficiency measures.

- Ensuring existing and new buildings are significantly more energy efficient and sustainable by clearly setting a trajectory for the progressive enhancement of the Building Regulations, led by the Code for Sustainable Homes to a level that exceeds the highest standards in Europe. Steps must be taken to ensure the Building Regulations are stringently enforced. To assist the achievement of these actions we believe the ODPM must have climate change as a Public Service Agreement priority.

- Building for future demand reduction by ensuing that the UK's new communities are planned and built to consume less energy;

- Encourage the use of planning powers to positively promote low energy developments, as has been pioneered by a number of Councils and by the Mayor in London with the London Plan.

- Enhancing the contribution the transport sector makes to energy demand reduction, both by improving vehicle standards and providing competitive and convenient alternative options to unsustainable car use.

- Leading by example with local and national Government setting themselves open, transparent and stretching demand reduction targets, including the much wider use of energy services companies.

- Similarly, procurement needs to move in the same direction as policy. Energy efficiency screening should take place on all Government funding, similar to the European Bank for Reconstruction and Development screening process that already takes place with all their investments. Energy efficiency measures must be integral to all PFI projects and linked into driving a market transformation for energy technologies and services.

- Enabling industrial and commercial energy users to make wider use of energy efficient technologies such as CHP.

- Sustained action to improve the energy efficiency of all new appliances.

Taking forward the Energy Efficiency Commitment

- Remove the policy constraints within the existing EEC policy framework. For example, if EEC is intended to achieve energy efficiency and carbon reduction, then we believe fuel poverty is best tackled through a separate policy approach. We have therefore reflected this and addressed fuel poverty in a separate paper.

- Enable EEC 2 & EEC 3 to be used as opportunities for companies to experiment, innovate and compete. Provide incentives for suppliers to test new ideas, giving maximum flexibility for new technologies and services and encouraging suppliers to compete for better solutions.

  Options include: rewarding behavioural change due to the roll out of new technologies such as smart metering or real time energy displays; enabling suppliers to develop options for tariffs which encourage consumers to reduce their energy use (whilst maintaining consistency with the competitive market); and, where appropriate, supporting the role of microgeneration technologies.

- The funding announced in the Budget 2006 and the Climate Change Programme represents welcome and important first steps. This, combined with additional funding and EEC 2 & 3 resources should be consolidated and used to create a package of incentives that enables companies to compete to innovate and trial demand reduction activities over the next five years.

- Take an integrated approach to this trial and innovation phase, and build up an evidence base that will enable a better understanding of what measures can deliver the most significant benefits. Examine data flows and consider how actual demand reduction can be measured and monitored. Map the transactions that take place and identify those where an energy company or other players may be able to influence behavioural change and energy efficiency.

  Experiment to develop the right mechanism that can deliver carbon reduction beyond EEC 3. In the first instance, it would helpful to see what can be learnt from other policy mechanisms such as the EU ETS and the RO, such as the benefits of longer timescales and the incentives associated with more stretching targets.

  Specifically, we would suggest exploring the options for the trial of a market-based demand reduction mechanism in the commercial and public sectors prior to 2011. This might be a cap and trade system focused upstream on suppliers, and could well be compatible with the proposals by the Carbon Trust in the Energy Efficiency Innovation Review. A supplier cap on demand could lead to innovations such as energy service offerings and creative tariff structures, while retaining low transaction and administration costs. Ultimately, it may be appropriate to extend such a mechanism to the SME and other sectors.

As a minimum, the Government should trial a closed ‘cap and trade’ scheme within the public sector, thereby providing a similar lead to the internal BP scheme for emissions trading. This would have the additional advantage of reducing public expenditure on energy.

- Energy suppliers have signalled their willingness to consider new approaches that could, in the context of needing to deliver the UK’s goals of significant carbon emission reductions in the next few decades, significantly alter their business approach. However, they also need confidence in the Government’s commitment to support this process. Enabling customer ‘pull’ is essential to this. Signals that the Government will introduce strong fiscal incentives, and more broadly, a comprehensive approach to tackling energy efficiency are crucial.

IV Investment and Generation Capacity

Energy Review Questions: What more could the Government do on the supply side for energy to ensure that the UK's long-term goal of reducing carbon emissions are met? Are there particular considerations that should apply to nuclear?

Context

It is generally acknowledged that the energy sector, now and over the coming decade, faces a period in which massive investment will be required. This paper considers what might need to be done through Government policy to facilitate investment in any generation capacity that will be needed. It also discusses the considerations that might apply to particular generation technologies and how they might be accommodated within an overall, consistent policy framework.

At least 20GW of generation capacity will have been decommissioned by 2020. There is already a need for early construction decisions about a number of CCGT projects in the pipeline, stimulated in particular by Magnox decommissionings. To some extent the timing of these decisions is dictated purely by market factors. However, unresolved policy concerns inevitably also play a part. While it may be assumed that some of this investment will go ahead, the need will increase greatly in the next decade as the LCPD bites on coal plant and AGRs face the end of their lives.

In the next few years replacement generation is likely to be largely by CCGT, and, in the right market conditions, CHP on major industrial sites. This will mean that whilst imported gas will be used much more efficiently than at present (hence improving the UK's energy security) the dependence of the electricity system on gas will, in overall terms, of course increase. It is against this background that we have also considered Gas Markets and Flexibilities in a separate paper.

The policy framework needs to take account of the long-term nature of investment in new generation. As far as possible it should create a level playing field so that investors have a genuine choice between technologies. In the context of a competitive market, this is the most appropriate way of maintaining the present diversity of generation sources. It also needs to encourage the development of newer, less proven technologies where they will contribute to both security of supply and environmental objectives. A key part of any long-term policy framework is an assurance that can be relied upon that there will continue to be an active carbon market after 2012 and into the long term.

Recommendations

In order to deliver the investment necessary to ensure secure supplies of energy, the steps that we propose are outlined below:

- Long term policy framework

  Investment in any form of generation capacity and associated infrastructure is a long-term proposition. It is a fundamental requirement that there should be a clear and stable long-term policy framework so that investors can take such decisions with sufficient confidence. It is accepted that market risks will be taken by investors but it should be possible for investors to choose between a range of technologies, so that their own and society's needs for diversity can be met.

  That policy framework should therefore facilitate choice between commercially proven technologies. Alongside there may need to be special measures to promote particular technologies at an earlier stage of development. In any such framework there are two fundamental requirements, one is the removal of policy uncertainties and the other is care to avoid abrupt policy change that undermines investment.

  Overall, the industry seeks short-term certainty on key policy issues, and long-term clarity on the future policy framework in order to make confident investment decisions.

- Carbon

  The main policy uncertainty faced by investors at present concerns longer-term constraints on carbon and the associated market price. Carbon is considered in greater detail in a separate paper. Even if there have to date been political statements at both national and European levels that there will be an active carbon market after 2012, they do not carry sufficient weight, nor is there sufficient detail about carbon constraints, for investors to forecast carbon prices with any confidence. Furthermore, it is accepted that there may not be international agreements in place until very close to 2012 and even then there may be a lack of long-term clarity. In the meantime, in order to stimulate investment in low carbon technologies, there may need to be an interim mechanism that will guarantee a certain carbon price for the period over which the reduction in carbon emissions will be achieved by that investment. Resolving these issues in a timely manner is a key part of any long-term policy framework.

- Planning and consents

  As with other infrastructure developments, planning and consent issues remain a significant challenge for any new energy projects. This concerns generation projects (be they conventional thermal, nuclear, wind, or potentially CCS plant), and energy infrastructure, including transmission and distribution, as well as, gas pipelines and storage facilities. A more robust framework for the inquiry and consent process is needed, capable of ensuring scrutiny of all material issues, but enabling effective separation of national policy and generic matters from consideration of local site-specific issues. There are a number of ways in which the planning process for major energy projects could be made more effective, including through use of the Strategic Environmental Assessment Directive, and, wherever possible,

ensuring joint consideration of consents for a power plant (s36) and associated transmission (s37) or other infrastructure.

- Transmission reinforcement

  Another practical issue causing significant concern is that generation projects are faced with significant upfront transmission reinforcement cost liabilities, despite a shallow connection charging policy. This is a reflection of the significant investment uncertainty faced by National Grid. This issue should be addressed through a longer-term regulatory framework which assures cost recovery to the transmission licensees, facilitates government policy and which does not act as a barrier to the connection of generation projects critical to meet the nation's needs.

- Decentralised Generation

  In the right circumstances there can be clear efficiencies created by a more decentralised approach to generation, which can both reduce carbon and provide secure energy supplies. We see decentralised generation as an integral part of the UK's changing energy market, underpinned in at least the medium term by more conventional approach to the deployment of generation assets. The Energy Review is, however, an opportunity for the Government to give a clear signal that it welcomes, for instance, the Mayor of London's commitment to improving the capitals energy security and carbon emissions by moves towards a more decentralised model. In this context the Government could then set out how it might support and enable this transition. Government should then consider how to remove any barriers that might prevent other cities and councils from taking similar steps to London (the 'Woking approach') so that others have the opportunity to follow this path. The regulatory framework would need to evolve to reflect these developments in order to ensure that they are encouraged in an appropriate way.

- Demonstration & Deployment Phase

  A number of new energy technologies have moved beyond the R&D stage but have not yet made the transition to being long-term commercially viable options. It is critical that the Government support the demonstration and deployment phases in the evolution of these new energy technologies. Even if there were a long-term visible carbon-pricing framework, they will still need specific capital support at this phase, and a clear and stable strategy for their transition to commercial-viability. We would recommend the establishment of a specific fund for technologies such as wave, tidal, CCS that are beyond the R&D stages and moving towards the demonstration and deployment stages. This could be resourced by the revenues raised from auctioning allowances under EU ETS. Simultaneously, the Government must act in a prompt manner to remove any unnecessary policy barriers that might be delaying the deployment of these technologies.

Particular Technologies

The way in which a long-term stable policy framework might facilitate investment in particular generation technologies is outlined in the remainder of this paper.

- Coal

  While there are cleaner, more efficient coal options now available, they will still have far higher carbon emissions compared with CCGT. They could however be built with the capability of carbon capture being fitted later. A full coal burning carbon capture and storage scheme would depend on a number of issues being resolved, apart from the fundamental economics. These issues are covered in greater detail in a separate paper. They include the international agreements if carbon storage is to be sub-sea and the legal and regulatory issues concerning carbon transport infrastructure on land.

  The business case for CCS would then depend on there being visibility of future carbon prices and how such plant would be treated under an emissions trading scheme. Putting together the components of a full scheme would be a complex task. In view of this and other uncertainties, there would be merit in Government support for one or a number of demonstration schemes in the first instance.

- CCGT

  Realistically, this is the only capacity option available to meet current needs and has the merit of being proven, and having relatively low capital cost and time for construction. In addition, a significant amount of capacity has already been approved by Government. Even so, current uncertainties concerning energy policy and future carbon prices are holding back decisions to invest. In particular clarity on the level of the New Entrant Reserve for NAP II is essential in order to address this. Beyond this, no specific action by Government is required, beyond a clear and early outcome to the Energy Review.

- Nuclear

  Nuclear plant, in contrast with CCGT, is high capital cost, and will take a relatively long time to plan and construct. We anticipate this being in the order of 10 years, assuming a five-year licensing and planning cycle. Nevertheless, it would be likely to involve current technology, albeit further developed compared with previous projects. The business case is however particularly affected by policy uncertainties. The first is clearly whether this and future Governments will consistently support and make the case for replacement of nuclear plant. Clarification of future policies towards carbon is particularly required, since the operation of nuclear plant would potentially contribute to and could therefore benefit from carbon reduction. Another essential feature of a long-term framework concerns the licensing and

planning process, which needs to allow efficient choice between any recognised standard international designs.

If the Government wished to secure public acceptance for new nuclear, it will need to make a decision about the solution to be adopted for the long-term storage of nuclear waste. The UK's international treaty obligations means that long-term liabilities arise for the Government with respect to both waste storage and decommissioning. It has been suggested that the business case for new nuclear can accommodate an such new costs involved as long as those liabilities are clearly defined from the start. To achieve this would probably need a binding agreement, on commercial terms, between investors and Government as to the assumptions to be adopted and what future costs investors would need to fund. Investors could then consider the business case for investment based on a clear understanding of the risk profile

- Renewables

  Renewables have been and continue to be treated as emerging technologies requiring special support. The form of that support, specific capital grants and the longer term Renewables Obligation (RO), are particularly appropriate and should continue, so that investor confidence is maintained. There should be no changes to the RO that act retrospectively and thereby potentially undermine existing investments.

  Renewables would also benefit greatly from improvements in the planning and consents process, with a focus in inquiries being largely on local and environmental issues. It would also be assisted by strategic investment in transmission and distribution networks. To support new and emerging renewable technologies, we would suggest greatly increasing capital grants, perhaps funded by the revenues from auctioning under the EU ETS. It is essential that the Government act to support offshore wind if it is to be developed in the timeframe required to meet the Government's targets. Overall however, we do not believe, that there is a need to radically 'renew' renewables policy.

- CHP

  CHP technology is already used in the UK and offers significant scope for further carbon reductions, and for enabling major energy users to secure their own energy future in a sustainable manner. However, since the Government's major changes to the energy market in 2000, virtually all the members of the Council have ceased work in the development of industrial scale CHP.

  There is a general view across the industry that on current trends the Government will significantly undershoot its CHP target. Only with a reinvigorated delivery of the measures needed to achieve the Government's CHP target will it be realistic to anticipate that the development of CHP could resume its post-2000 growth trajectory and the Governments target achieved towards the end of the 2008–2012 Kyoto commitment period.

- Infrastructure

  What has been said about planning and consents applies particularly to infrastructure schemes, without which investment in new generation will not be effective at meeting security of supply. Regulation applies to infrastructure and needs to enable investment to take place to an adequate extent and in a timely way. Any rules for the use of it need to be agreed for a reasonable duration.

V Gas Markets & Flexibilities

Energy Review Question: Should the Government take actions to help the gas market to deliver the Energy Review objectives?

Context

In looking at the future UK supply/demand balance for gas, much attention is being paid to the supply of gas. It should also be recognised that there are several key variables on the demand side that will affect the future demand for gas. This includes the likely increase in domestic consumption, due to UK growth and likely continued reliance on gas for heating. In the short to medium term potential CCGT new build will be the predominant driver of UK gas demand growth. Continued investment in CCGT power stations is likely in order to replace the expected closure of nuclear plant and coal plant that are opted out of the Large Combustion Plant Directive (LCPD). It is important to also recall that the interests of the suppliers and Government have a shared interest in ensuring reliable and competitive supplies of gas.

Recommendations

- **Growing role of gas imports and investment infrastructure.** The market is successfully delivering a diverse range of sources and infrastructure projects. Use-It-or-Lose-It (UIOLI) rules could be made more robust to ensure unused capacity is made available to the market on fair commercial terms.

- **Importance of European policy to supporting efficient UK supply.** The UK Government should assist in achieving implementation of open EU markets, specifically access to storage and transportation infrastructure.

- **UK gas market operation and UKCS**. The UK has one of the most competitive gas supply markets. This should be maintained and undue intervention should be avoided. Clarity of Government policy regarding the generation investment climate will assist in appropriate gas investment being made to meet any concerns about security of supply.

- **Security of gas supply and the role of gas storage.** As the UKCS declines, the demand for gas increases, and the percentage of imported gas increases (particularly as new supplies to the UK are expected to be delivered in a less flexible manner[4]), then the UK gas market will need access to additional "flexibility tools". Consideration also needs to be given as to whether additional storage (or storage of the right type from a duration and deliverability perspective) is needed as security against interruptions to imports or infrastructure failure. The Council will submit a separate paper on this complex but important issue outlining a number of the options that are available.

[4] With regard to LNG, it should be recognised that this also has diversion options which may be governed by the highest price market.

Growing role of gas imports and investment in infrastructure

Recent investment evidence shows that the market is already pursing diversity of supply sources and routes. In fact the UK is developing one of the most diverse portfolios of gas imports in the EU. Gas imports to the UK will come from a range of producing countries including Norway, the Netherlands, Russia, Qatar, Algeria and Malaysia. To support these new imports a range of major infrastructure projects are currently under construction or committed to, including the BBL pipeline, the Dragon and South Hook LNG terminals and Langeled pipeline.

Choice of supply sources should continue to be made by the market. The main role of Government should be to continue to improve investment relations with producing countries and supporting the right international and EU regulatory framework to support secure and efficient transportation to the UK.

The market already has plans to provide £10 billion of new investment in gas import and storage projects for the UK between 2005 and 2010.[5] The pipeline and storage investments are being made by 24 companies from 11 countries, including major non-EU producers.

As for gas storage projects, the Government can help ensure this investment is delivered by streamlining the planning process and avoiding any undue restrictions.

New LNG and storage facilities have been granted exemptions from third party access under Article 22 of the Gas Directive. We believe that exemptions are appropriate to encourage such investments. However, it is important that there are procedures in place to ensure infrastructure use is maximised and spare capacity is offered to the market in a timely manner. The Government and Ofgem should ensure that exempted facilities provide aggregated capacity information to the market and have practical Use-It-or-Lose-It (UIOLI) arrangements in place. UIOLI must not be frustrated through the application of unfair or unduly restrictive terms and conditions. Further clarity on how UIOLI rules are to be applied in the case of LNG regasification facilities would be very useful in this respect.

Importance of European policy to supporting efficient UK supply

The UK will be importing more gas from and via Continental European markets. It is therefore important that this gas can flow efficiently through EU transmission networks and hubs.

We stress the need for full implementation of the 2003 Gas Directive and the 2005 Gas Transmission Regulation, as well as the need for rapid improvements in access to gas storage in Europe. Whilst progress has been made, recent

[5] Figure cited by The Secretary of State for Trade and Industry in House of Commons. 12 January 2006.

European Commission reports[6] have identified a number of problems including the difficulty of new entrants gaining access to capacity, low levels of market liquidity and transparency. Within the existing framework, further improvements are needed in:

- information provision (transparency)[7]
- third party network access including maximising use of existing capacity
- non-discriminatory access to gas storage facilities
- interoperability
- implementation of legal unbundling and
- consistency of regulators powers

The UK Government should continue to work constructively with the European Commission to follow through its commitment to implementation that meets the spirit of the Directive and support the role that Ofgem has within the European regulators groups, CEER and ERGEG, in pursuing a more effective and consistent level of national regulation within different Member States. In addition the UK Government needs to continue to assess the best solution for the issues raised by new gas imports in relation to national gas quality specifications.

We support the principle of promoting regional markets in the EU (that are genuinely pan-national and not constrained by national boundaries) as an immediate priority. This should facilitate essential inter-TSO and inter-regulator co-operation. But, given the need for gas imports to flow from the EU's eastern borders to the north-west, the ultimate objective must continue to be a fully liberalised and integrated EU-wide market.

UK gas market operation and the UK Continental Shelf (UKCS)

The UK remains one of the world's most liquid, transparent and competitive gas markets. As such, Ofgem should focus on maintaining this situation, avoiding undue intervention. Where new policy initiatives are needed in environmental and social areas, the Government and Ofgem should seek to ensure that these are met in a way that continues to be compatible with the competitive market.

We welcome the increased level of information provided to the market over the last year and would support further improvements where they enhance market efficiency. In particular further information on field depletion may help UK suppliers plan better to secure alternative sources of gas and facilitate investment planning for the transmission system.

We believe the DTI remains the most appropriate regulatory authority for UKCS operations.

[6] The DG Tren 15 November 2005 report on implementation of the Gas and Electricity Directives and the DG Competition 15 November 2005 issues paper and 16 February 2006 preliminary report on the Energy Sector Inquiry.

[7] The UK model of information publication could provide a useful template for this.

VI Carbon Capture & Storage

Energy Review Question: Are there particular considerations that should apply to carbon abatement and other low-carbon technologies?

Context

UKBCSE members are actively considering industrial scale projects in the UK involving the capture and storage of carbon dioxide from thermal electricity generating plant. We consider Carbon Capture and Storage (CCS) to be a potentially viable and important technology in the longer term. However, if technically proven, we do not believe it can then deliver more than around 4-5 full-scale projects, totalling some 2-3 GW in capacity in the next 10 years or so.

Development of CCS projects does involve substantial risk. They will also cost significantly more to build and operate than non-CCS thermal generation. These costs and risks are very unlikely to be absorbed by private investors in today's competitive energy market and therefore support from Government may well be needed in order to prove the commercial viability of large scale CCS.

However, we believe there is a case to justify any Government support given the potential benefits that CCS can bring to the energy mix. Support for early projects would help position the UK to further facilitate the wider rollout of the technology. This will help mitigate against future fuel price shocks by maintaining fuel diversity, create a new revenue stream for the North Sea, and reduce carbon emissions. Moreover, there is potential for the UK to be in a leading position in the development of CCS technology worldwide.

The right long-term market incentives, primarily through the continuation of the emissions regulation and the carbon trading regime and the right regulatory framework, could lead to a roll out of the technology in the UK, and overseas, for many large-scale point sources of carbon. However, without support in the areas outlined below, CCS is unlikely to be developed in the UK.

Recommendations

CCS demonstration units can be built in the UK, and the private sector is prepared to make the investment in circumstances where:

- Financial support is available for the first few CCS demonstration projects. Support need not be a new long-term market mechanism specifically for CCS or through changes to other existing mechanisms such as the RO. Instead we would recommend that the revenues gained from auctioning allowances under the EU ETS be used to fund a range of energy technologies including CCS. In the long-term higher carbon prices combined with cost reductions in technology should make CCS economic.

- Clarification of key regulatory and legal issues.

Specific areas to be addressed

- Technical Issues

  Although the majority of the various elements of technology that constitute a CCS power project are proven on a smaller scale, this first phase of projects will use first-of-kind processes in a combined form at an industrial scale.

  CCS can be delivered in the UK via a number of potential routes. Existing coal stations can be retrofitted with post combustion scrubbing equipment to capture carbon; gas and coal can be converted to hydrogen in pre-combustion chemical processes and then used to power converted existing CCGTs or new, dedicated plant.

  The ability to make use of CCS at and near existing thermal generating plant, a number of which will be due for closure in the next 10 years, has many advantages including: avoided network reinforcement costs, use of existing transportation networks and reuse of brown field sites. New developments (either with post or pre-combustion technologies) can be designed specifically to take advantage of storage infrastructure, for example in the North Sea, and elsewhere.

- Infrastructure issues

  The first CCS projects will only be viable if they can recover the cost of providing, or buying, access to their own pipeline infrastructure to transport CO_2 to storage fields. There is a strong likelihood that these early projects will need to make use of existing gas pipelines, which can be converted to carry CO_2.

  In the future new pipeline networks may be needed to transport carbon dioxide and/or hydrogen across the country. A study into the potential demand for, and delivery of, these new networks should be commissioned to inform thinking about the long-term potential and development of this technology.

- Regulatory Issues

  A key issue the Government needs to address to facilitate investment in CCS technologies is the introduction of a legal framework covering the licensing and operation of each element in the CCS chain.

  We anticipate that the first round of projects will make use of off-shore storage, however, in establishing the new regime Government would also need to cover the treatment of on-shore storage.

  We welcome the efforts the UK Government has made so far to update relevant international off-shore regimes which have an impact on off-shore storage. It is essential and urgent that a consents regime for storage of CO_2

without Enhanced Oil Recovery is introduced. Only then will the storage capacity in the South North Sea be able to be usefully exploited.

In addition a number of key issues must be clarified:

- What risk assessment criteria will projects be required to meet?
- What information will be required by DTI, EA and HSE to consent new CCS projects?
- How will long term reliability of storage be demonstrated?
- What environmental limits will CCS projects be expected to comply with?
- Who will carry legal liability for the CO_2 at each point in the chain?
- Once in storage who carries the liability – the shipper, storage operator or the producer?
- At what point should liability transfer to Government?
- How to ensure fair and equal third party access to transportation and storage infrastructure?

Council members are actively involved in the preparation of feasibility studies for CCS projects and will be pleased to co-operate with Government and its Agencies to facilitate the early introduction of appropriate regulatory and legal frameworks.

A consistent theme of the Council's response has been the need to address the planning and grid connection processes. These generic issues for all new infrastructure developments also apply to CCS.

- Economic issues

In the short term CCS projects require substantial support, as there are considerable risks and costs associated with these projects that cannot be justified under current market conditions. As there are likely to be a limited number of discrete full-scale projects developed over the next few years, Council members do not consider that the introduction of a new market-based support mechanism specific to CCS would be appropriate. It is also considered that the inclusion of CCS into existing market mechanisms i.e. the Renewables Obligation would also be inappropriate as this could have a destabilising effect on that market.

The Government should initially consider the merits of CCS projects on a case-by-case basis, informed by a consideration of the benefits listed above. Support could then be provided in the form of, for example, capital grants and/ or 100% capital allowances in the first operating year. It is likely that more than one measure will be required to deliver the amount of money required to do multiple projects. To fund this, we would also recommend that the receipts from auctioning allowances through the EU ETS fund the deployment of a range of new energy technologies including CCS.

In addition, Government can make CCS projects more or less competitive through its treatment in related policy measures, for example, the climate change levy and the EU ETS. It is estimated that the first projects will require substantial one-off support but that subsequent projects will benefit from this investment, through the establishment of re-usable infrastructure, reduced cost curves and improved knowledge and expertise.

VII Networks

Energy Review Question: What are the implications in the medium and long term for the transmission and distribution networks of significant new build in gas and electricity generation infrastructure?

Context

Networks require investment in long-life assets. In order to ensure that investors are willing to invest, they need adequate rates of return and a long-term stable regulatory framework. The current regulatory structure has generally served the UK well and should therefore remain in place. It has, until recently, only needed to deal with incremental investment that can realistically be achieved within a price control period as the emphasis has rightly been on efficiently incurred costs in the shorter term.

However, the last Distribution Price Control was an important milestone with a recognition of the need for a step change in investment to enable the replacement of aging assets in an efficient and timely way. This is a fundamental issue for both the electricity transmission and distribution systems. Replacement ensures that existing levels of security and reliability are maintained but also offers the opportunity to enhance and update these assets to take advantage of new advances in technology.

At a time when network infrastructure requires significant replacement, there is also a public policy desire that networks rapidly connect new generation and gas importation projects. Neither can be achieved in an efficient and timely way without clarity as to the future demands on the networks. This creates tensions between the current regulatory regime and Government objectives.

It is essential that the regulatory view looks across more than one price control period. This will allow the most efficient networks to be built in the longer term and allow efficiencies through skills development programmes, resourcing and contracting. There are a number of modifications that the Government or Ofgem could make to ensure the regulatory framework adapts to meet our current and future challenges.

Recommendations

- In order to achieve this longer-term regulatory view, a common understanding between Government, Ofgem, network companies and developers is needed as to the network infrastructure that is required in the future and over what timescales. This includes whether particular investment has strategic significance for the Government that may warrant specific recognition in regulatory terms. Regulatory recognition of the considerable uncertainty attached to planning and building network infrastructure in the face of uncertain generation plans is also important.

This could assist in creating a medium term view and ensure that networks are designed to most efficiently accommodate these overall needs

- The Government should provide renewed and effective guidance to Ofgem on the wider public policy objectives that should be taken into account during price controls and as part of their wider regulatory activities.

- Early clarity is required on the regime for offshore networks in order to provide a platform to facilitate the growth of large-scale wind development and energy from wave and tidal power.

- Distribution and transmission systems should be developed in order to facilitate distributed generation through active distribution networks, whilst retaining current levels of security of supply.

Broader Issues

Network companies support the Government's drive to combat climate change. As well as facilitating the connection of low carbon sources of energy supplies, networks can also play their part in achieving the UK's carbon and greenhouse gas reduction goals. The Government could support the incentivisation of the reduction of greenhouse gasses, such as SF6. It could also encourage an even greater reduction in losses over the electricity transmission and distribution networks as part of the work on the replacement of lower loss assets, through further incentivisation in the price controls.

As well as streamlining public policy and regulatory arrangements, another key determinant in the timely delivery of networks is the planning and consents regime. It is vital that this is not an undue barrier to network investment. Barriers can be reduced by ensuring there is consistency with the planning approach for generation, gas import and network infrastructure projects and the associated regulated regimes for connection. The Government should also ensure that planning and consents are given for the whole project at the same time i.e. the generation plant / gas facility and its connection assets to minimise the delay in delivering nationally required infrastructure. Consideration should also be given to applying the strategic environmental assessment regulations to the outcome of the Energy Review to ensure infrastructure it considers but is not unduly held up by local debate.

There are also wider issues that affect the delivery, and the costs of delivery, of networks. In common with the wider energy sector, there is a growing skills shortage, especially in engineering and sciences. The energy sector will continually need to change and adapt. This cannot be achieved without a highly skilled workforce to deliver these changes. Whilst many energy companies are running programmes to encourage and develop skills at the higher and further education levels, this requires a sustainable and long-term regulatory framework. There is also still a role for Government in the encouragement of engineering and sciences in school age children through the national curriculum.

In terms of the costs of delivering networks, this can sometimes be increased quite substantially by the cost and delivery implications for networks of wider Government policies, which can, often unintentionally, create significant additional burdens on network companies. Examples of this include the Traffic Management Act and the water preferred policy for moving abnormally large loads. The result is that significant cost needs to be passed onto energy consumers.

Whilst EU energy policy is still relatively immature, its implications are already being felt in terms of rules on cross border trading in electricity, the development of interconnectors and LNG importation facilities, and gas exit arrangements requiring implementation in GB. Through the recently issued EU Green Paper on energy policy, a more active agenda has been signalled with networks being seen as key to delivering this vision. It is, therefore, no longer possible to consider UK or GB energy policy without reference to EU energy policy; a theme now present across many aspects of the UK's energy agenda.