



SECURING THE UK'S POWER SUPPLIES: HOW TO DO IT SUCCESSFULLY, SUSTAINABLY, AND COST-EFFECTIVELY

Consumer Focus, SSE, University of Exeter and WWF have organised a series of roundtables to bring together organisations from across the energy sector, including academia, environmental and consumer groups, the supply chain, technological providers and utilities, to discuss the latest developments in UK energy policy. These discussions were based around a number of key themes, with the objective of identifying what needs to be done to deliver a secure, affordable and environmentally sustainable power sector in the UK by 2030 and one which could generate substantial economic growth opportunities for the UK.

The roundtables produced a strong consensus across participating organisations that current Government policy, including the proposed Energy Bill, is inadequate in terms of:

- Delivering the substantial energy savings the UK needs to deliver to meet its security of supply and decarbonisation objectives cost effectively;
- Ensuring that the way infrastructure is funded does not have disproportionate impact on consumers and especially low-income consumers;
- Providing the renewable energy sector with the investment certainty it needs to deliver the promised cost reductions, increased deployment and job creations it could offer the UK;
- Ensuring that a wide basket of options are incentivised to maintain system security cost effectively in the UK and that there is an appropriate emission limit safeguard to prevent a breach of carbon budgets.

This communiqué summarises the key areas of consensus and recommendations made by the group across the 4 key themes that were discussed.





THEME 1: Managing Primary Energy Demand

The group agreed that managing primary energy demand must be the centrepiece of energy policy, not an afterthought to make decarbonisation easier.

Managing energy demand and energy demand reduction encompass four principles:

- Minimising energy use as far as possible while ensuring that households are able to maintain adequate levels of heat and fuel for health and wellbeing;
- When it is utilised, it should be used as efficiently as possible;
- Where possible, demand side response should be used to ensure that most energy is used when there are more renewables on the grid, and that peaks are reduced so that high-carbon peak generation needs to be used as little as possible; and
- Demand side response is fully enabled to participate within the wholesale energy market.

Together, these steps should minimise total energy demand.

There was consensus that current policy does not go far enough in ensuring that these four principles are delivered. The risk of not implementing policies which minimises total energy demand is that Britain will continue with a 'dirty and insecure' energy system.

Current demand reduction policy

- Current policy governing demand reduction initiatives is incredibly disjointed creating complexity and confusion for both householders and businesses and the area should be overhauled and streamlined.
- There was consensus that:
- Policies are needed to significantly improve energy efficiency, as the Green Deal and ECO are intended to do.
- All parties involved are keen for these policies to succeed.
- The group has severe reservations about the detail of these policies and how they will be implemented and share the concerns of the Committee on Climate Change that they will not only not deliver, but may not deliver as well as the current policies.

Managing primary energy demand

In order for managing energy demand to take the central role in a sustainable energy strategy, customers (of all types and sizes whether local authorities, communities, citizens or citizens groups, aggregators) will need to be at the heart of the energy system. The relationship between customers and



energy service providers needs to change or develop. Investment in energy demand reduction will need to be seen as critical to energy infrastructure.

Prior to the passing of the EU Energy Efficiency Directive the group strongly supported the UK Government pushing for binding targets.

There was consensus that the following policy responses are required to ensure this happens:

- Energy efficiency should also have an obligation, in parallel to the carbon reduction or renewable energy obligation
- In the same way that carbon reduction and renewable energy is subject to a binding policy, so reducing total energy demand should also be subject to a binding UK policy
- Ensure the Green Deal Finance Mechanism has low interest rates.
- Demand response must be provided with the right incentives to compete equally within the capacity mechanism and energy efficiency must also be given equal status in the Energy Bill 2012.
- A robust financial mechanism must be implemented to drive energy efficiency, potentially through the development and implementation of an Energy Efficiency Feed-in Tariff with a full trial to test the initiative.
- Development of expertise in energy management

THEME 2: Affordability of Energy

DECC data shows that the cost of energy will increase considerably by the end of the decade. Predicted increases in global commodity prices will make the largest contribution, together with the cost of overhauling our aging energy infrastructure and making it suitable for low carbon generation. Public policies such as the Renewable Obligation, feed-in tariffs, EU ETS and Carbon Price Floor will also contribute, although energy efficiency policies will help offset some of these rises. High energy prices hit low income consumers particularly hard because energy bills account for a much higher proportion of their budgets than those of better off consumers.

Rising energy prices

There was consensus that:

- We must secure a low carbon future, but recognise that this will entail substantial investment in new infrastructure. Addressing the impact of these costs on low income consumers requires measures both internal and external to energy policy. The group does not consider the Government's analysis of the impact of policies on energy prices and bills sufficiently addresses the problems faced by different low income consumer groups across regions, tenure and property types; and believes that the highly



ambitious assessment of the impact of products policy on reducing bills is not credible with respect to low income consumers.

- Policy costs should be recovered in the least regressive manner. In the first instance through public expenditure, rather than levies on energy customer bills. Where levies are raised through bills this should be based on consumption, providing that mitigation measures are put in place to protect the small minority of low income consumers with high levels of consumption.
- The current suite of measures for vulnerable customers – Warm Home Discount, Cold Weather Payments, Winter Fuel Payment – does not provide the protection required nor is adequately targeted at those most in need.
- It is essential that affordability is built in to Government and regulatory energy policies, such as energy market and retail market reform and that distributional effects are recognised and addressed.
- Enabling the deployment of decentralised and community level energy systems can deliver more affordable energy for households, particularly with respect to heat. Policy must address the means for delivering heat networks, while renewable heat policies should initially focus on providing affordable warmth to low income, off gas consumers.

Delivering energy efficiency

There was consensus that:

- A programme to carry out deep retrofitting of our homes, focussing initially on those occupied by low income consumers, is essential for ensuring long term affordability. Policy to date, with the exception of some social housing providers, has not been nearly ambitious enough. Consumers need good quality energy efficiency advice that is independent and integrated with other advice provision, for example on income maximisation, care needs and housing.
- Regulation and the use of minimum standards has played a vital role in driving up energy efficiency performance. New regulations and standards, for example relating to consequential improvements, and a new ambitious Decent Homes Standard, are essential for driving up energy efficiency performance in the future.
- The Green Deal and ECO, as they currently stand, are nowhere near sufficient to meet the challenge of eliminating fuel poverty and ensuring affordability for all. The majority of ECO funding should go towards low income consumers to offset its regressive impact and ensure greater impact on fuel poverty. The group is concerned that with the ending of Warm Front in England, fuel companies will become solely responsible for addressing the social issue of inadequate insulation and heating in the homes of low income consumers.
- Systematic, street by street, area programmes are essential for delivering the major retrofit programme required, provided they are supplemented with non-area specific programmes. It is essential that consumers trust those in charge of programmes and that local and third sector agencies are involved as equal partners.



Finding the resources for delivering affordable energy services

There was consensus that:

- Government needs to take a balanced approach to financing policy initiatives. In recent years there has been an increasing tendency to do so by charging levies to consumer bills. In the future, and where possible, there should be greater consideration of using direct public funding instead.
- Government should restore public funding of energy efficiency for low income consumers in England, while recognising the important contribution of supplier obligation programmes.
- Government should be urged to recycle the proceeds from the carbon floor price into a consumer energy efficiency programme, focussed initially on the fuel poor. This would help the floor price work better and increase consumer acceptance of the mechanism. The same approach should be followed using a substantial proportion of the proceeds from future EU ETS auctions

THEME 3: Reduced Carbon Intensity and Environmental Risks

The group agreed that the following options could deliver the required level of decarbonisation in a way that protects the natural environment and is reliable, cost-effective and could maximise jobs and growth opportunities for the UK economy.

A strong EU-wide carbon price

There was consensus that:

- Carbon pricing has an important role to play in supporting the move towards a decarbonised energy system although it was considered that the EU ETS was failing to deliver such a signal.
- The UK should continue its efforts to advocate in favour of a tighter emission reduction cap of 30% emission reduction by 2020 under the EU ETS (up from 20% currently) but that this needed to be done in conjunction with pushing forward measures to improve the affordability of energy as highlighted in Theme 2.
- Carbon pricing alone is not a reliable long-term instrument to stimulate investment in low-carbon infrastructure because of its vulnerability to future political changes and the fact that carbon pricing cannot be set at the level required to stimulate the accelerated innovation and investment needed in emerging and new low-carbon technologies. However, it would be more justifiable if the revenues raised through this mechanism were recycled into energy efficiency measures, particularly those targeting consumers most at risk of fuel poverty.



The role of targeted and proportionate financial support policies and environmental safeguards for emerging low-carbon technologies

There was consensus that:

- Financial support mechanisms that are targeted to particular technologies, proportionate to the degree of maturity of a technology (i.e. not a blank cheque) and time limited are key to incentivise the deployment of new and emerging low-carbon technologies such as renewables, accelerate their cost reductions and set the basis for economic growth opportunities in the UK.
- To provide investment certainty to the renewables sector, financial support mechanisms for renewables needed to be simple, predictable and backed by Government.
- In its current form, there was a majority view that the CfD Feed-in Tariff structure, was primarily designed to support nuclear power, did not meet these criteria and was inappropriate to support renewable energy technologies.
- Government therefore needs urgently to review the adaptability of the CfD FiT for small and large scale renewables and to ensure in the meantime that section 1 of the Energy Bill is worded so as to allow the Secretary of State to introduce a feed-in tariff other than a FiT CfD to provide some flexibility if the design of the CfD proves to be too complex and not achieve the desired objectives.
- There is a strong likelihood that the EMR package will come under State Aid scrutiny by the European Commission due to the financial support it will provide to new nuclear plants. Given the urgency with which the UK needs to decarbonise its power sector, the Energy Bill should be designed so that the support measures being provided to other low-carbon technologies such as renewables and carbon capture and storage (CCS) can progress irrespective of any delays affecting the nuclear part of the package.

The role of an achievable but ambitious 2030 renewable electricity / energy target

There was consensus that:

- Government should adopt in the Energy Bill an overall decarbonisation target of 50gCO₂/kWh by 2030 as recommended by the Committee on Climate Change in the Fourth Carbon Budget.

Developers and supply chain business must also be confident of a sustained high ambition for renewables through the 2020s to ensure that the promised cost reductions and UK supply chain jobs of renewable technologies materialise in the near future.

There was consensus that:

- UK Government should support an ambitious and evidence-based 2030 renewable energy to be set at EU level and backed by binding national targets.



- Others believed that an ambitious carbon reduction target in the Energy Bill together with national plans for renewables out to 2030 would help provide the necessary certainty for the renewables sector post 2020.

The role of an effective CCS demonstration programme

There was consensus that:

- CCS could have a role as a transitional technology reducing carbon emissions from existing unabated fossil fuel plants and heavy industry.
- No firm position could be adopted on CCS until the substantial uncertainties around the commercial feasibility of CCS are solved.
- Current energy policy should not make any assumptions as to the future availability or cost-effectiveness of CCS before the technology is proven.
- UK CCS policy should urgently focus on putting in place once and for all a stable and well defined CCS demonstration programme on a variety of plants.

THEME 4: Maintaining security of energy supply

In order to design and implement policies effectively, Government must first define what it believes a secure energy system to be. The group was unanimous in its view that a secure energy system has the following component parts:

- ✓ it would provide affordable energy;
- ✓ be efficient and ensure as little energy as possible is used;
- ✓ ensure the security of energy sources, including adequacy to be able to both meet peak demand, and be able to cope with any demand and/or supply side shocks;
- ✓ capacity should be sufficiently reliable and flexible; and
- ✓ there should be a sufficient and appropriate supporting infrastructure.
- ✓ Is environmentally sustainable.

Although an optimal system will require the right balance to be struck between power, heat and transport systems, the group focussed primarily on the power sector. In order to provide a secure energy system going forward the following points were agreed:

Appropriate demand reduction and efficiency measures

There was consensus that:



- Permanent reductions in overall demand would make the energy system more secure, and measures encouraging these should therefore be prioritised.

Secure energy sources

There was consensus that:

- Achieving a diverse mix and range of fuel sources was key to maintaining a secure energy system; and that decentralised energy could and should have a significant role to play in this diverse mix.
- When considering a diverse fuel mix, renewable energy should not be classified as a single energy source – different renewable technologies have different characteristics all of which contribute to the diversity of the fuel mix.

Capacity: ensuring a sufficient de-rated capacity margin and the provision of sufficient reliable, flexible capacity

There was consensus that:

- Increased deployment of demand-side response (DSR) and storage technologies would make the UK's energy system more secure. Increased flexibility, rather than resource adequacy, that DSR and storage provide the energy system means it is more easily able to withstand supply shocks, smooth overall demand, and that less total capacity is required overall, making the UK more self-sufficient. The group therefore believes that DSR and storage technologies, many of which are still in their infancy, should be actively supported and encouraged by Government through the provision of R&D funding.
- Increasing the UK's levels of interconnection with other countries had clear benefits and should be a priority for Government. These benefits include
 - ✓ the potential to export excess UK renewables output,
 - ✓ option to import electricity from the EU if necessary,
 - ✓ reduce costs by helping to normalise prices across the EU,
 - ✓ weather risk management system.
- The value of interconnection in security of supply terms needs to be better understood through further analysis and debate.
- The UK should play a leading role in driving forward the North Sea grid, a project which is not being developed with enough urgency.



Emissions Performance Standard (EPS)

There was consensus that:

- EPS as currently designed in the Energy Bill cannot be relied on as an effective safeguard to deliver a near-decarbonised power sector by 2030.
- Support provisions for EPS and the security of supply in the Energy Bill need to be designed together as an integrated package of measures to ensure that the objective of delivering near-decarbonised power sector of 50gCO₂/kWh by 2030 can be met whilst ensuring that sufficient revenue predictability is provided for investment in all forms of system security options
- Any capacity mechanism introduced by the UK Government should allow alternatives to traditional forms of capacity i.e. storage and demand side response to fully participate.

Sufficient structural capacity

There was consensus that:

- Government should continue to explore in detail the potential for a collective plan to design and develop a North Sea grid under regulatory asset model.
- Local electricity infrastructure, particularly the distribution networks, will not, in its current state, be able to meet higher levels of decentralised energy or be able to be significantly more responsive to customer demand. Further investment in the distribution networks in order to make local grids more secure is therefore necessary.