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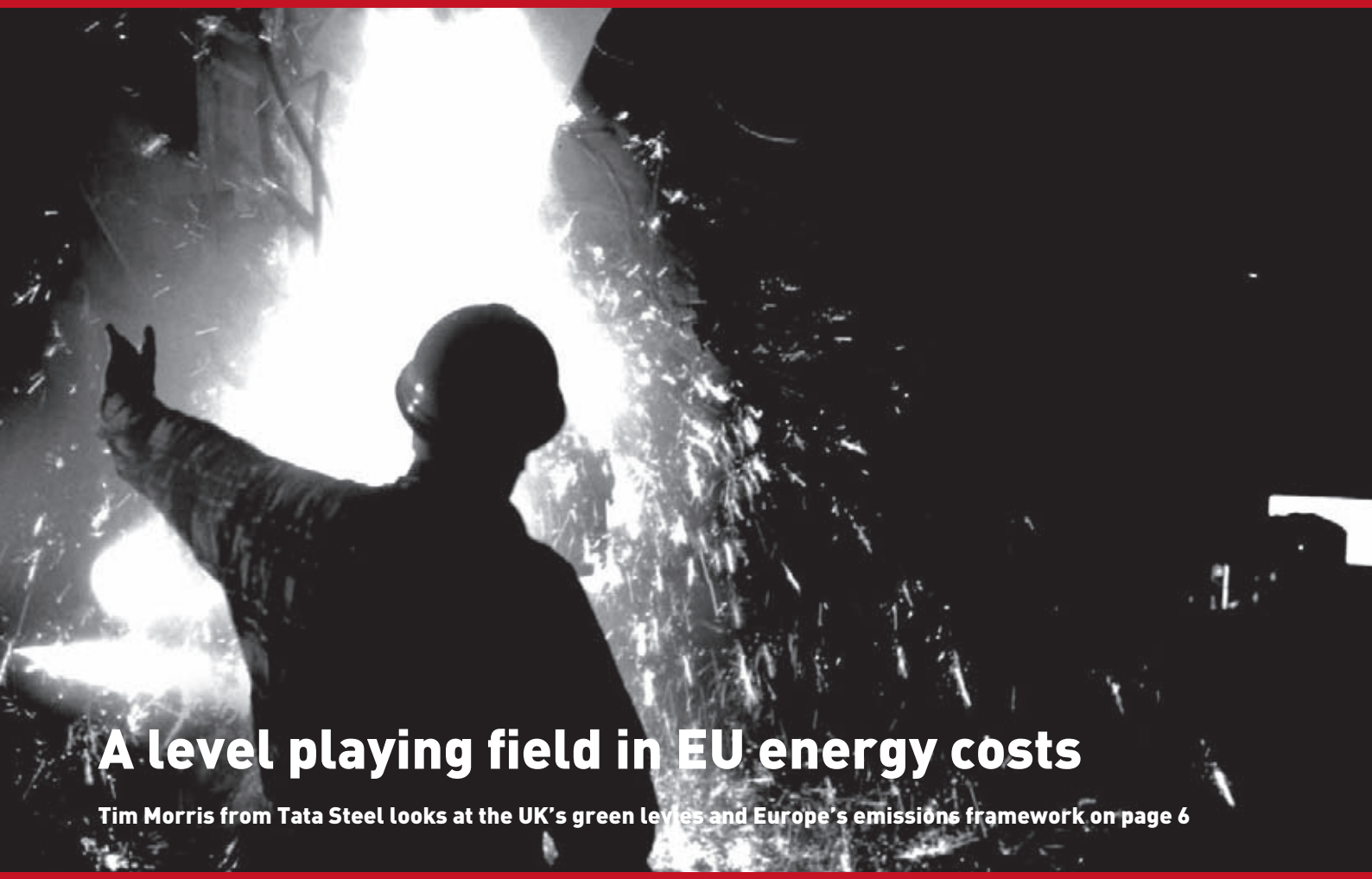
ENERGY FOCUS



A level playing field in EU energy costs

Tim Morris from Tata Steel looks at the UK's green levies and Europe's emissions framework on page 6

The journal of the
Parliamentary Group
for Energy Studies

The Parliamentary Group for Energy Studies
Established in 1980, the Parliamentary Group for Energy Studies remains the only All Party Parliamentary Group representing the entire energy industry. We champion cross-sector energy research and development. The Group's membership is comprised of over 190 parliamentarians, 130 associate bodies from the private, public and charity sectors and a range of individual members.

Published three times a year, *Energy Focus* records the Group's activities, tracks key energy and environmental developments through Parliament, presents articles from leading industry contributors and provides insight into the views and interests of both parliamentarians and officials.

Executive Council

Contents

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CHAIRMAN'S FOREWORD

This year is speeding past, with both the PGES annual dinner and the Chancellor's Budget already behind us.

The annual dinner was once again a great success and I would like to take this opportunity to thank the Secretary of State for speaking, and to Costain for making the event possible. I was especially delighted to meet some of their graduates and apprentices who I'm certain will ensure a bright future for the sector.

In addition, in March, the Chancellor rose in the House to deliver his Budget. As part of that, he acknowledged the great contribution that the UK's heavy industry and major energy users make to the economy: making up 35% of manufacturing exports and employing half a million people. So this issue, I'm delighted that we will be hearing directly from those involved in and around the organisations affected by the announcements.

Once again, we have an array of high-level contributors including:

- **Andrew Bainbridge**, Chairman of the Major Energy Users' Council (MEUC) looks at four key campaigns to eliminate the threat of blackouts **(page 4)**.
- **Tim Morris**, Head of Public Affairs at Tata Steel explains why action on the UK's escalating green levies and Europe's emissions framework is so important **(page 6)**.
- **David Workman**, Director General at the Confederation of Paper Industries, looks at how the industry is working together for the future **(page 8)**.
- **Dr Meloria Meschi**, Managing Director of Economic and Financial consulting at FTI, looks at the benefits of carbon leakage exemptions **(page 10)**.
- And as if that wasn't enough, our very own **PGES Treasurer Neil Parish MP** considers international and domestic threats to the UK's energy security, and explains what the Government is doing to address them, in our interview section **(page 12)**.

As always, we are always delighted to hear from members, so please do share your thoughts and feedback by emailing Sophie Fernandes, editor, at **sophiefernandes@pges.org.uk**

Ian Liddell-Grainger MP
Chairman of the Parliamentary Group for Energy Studies

KEEPING THE LIGHTS ON

Andrew Bainbridge, Chairman of the Major Energy Users' Council (MEUC) looks at four key campaigns which could help eliminate the threat of blackouts.

As we head towards a general election it would appear that whatever progress had been made in providing for Britain's energy future has ground to a halt. The sad fact remains that as coal-fired power stations continue to be phased out, little is coming forward to replace them.

A major offshore array has been abandoned and civil servants still report that we are a long way off a final agreement to proceed with Hinckley Point C nuclear power station. Britain's major energy consumers are expressing deep concerns that sooner rather than later the 'lights will be going out'. The political goodwill on energy within the Coalition that was so apparent during the first few months of this Government has run of out steam.

The priorities

Without political direction, investment will not be forthcoming. Without investment the planning margin, or spare capacity to cope with peak demand, is reducing further and about to go critical. If nothing changes by the end of this year, the MEUC's industrial and commercial organisation members fear they will be facing power cuts. In turn, this will severely affect the country's ability to continue to grow the economy and provide the much-needed jobs to reduce unemployment.

Larger consumers need to carry on and now many are looking for creative ways to permanently reduce their consumption and/or create their own generation to secure their future.

Findings from a recent survey of members carried out during our annual Westminster Energy Conference revealed serious concerns, with the majority stating they couldn't afford to wait for the results of the next election before making progress.

As a result, MEUC will this year be focusing on four key messages for the benefit of our large business organisation members:

1. Delivering demand reduction to keep the lights on.

2. Supporting members to get the best out of third party intermediaries (TPIs).

3. Supporting members to keep energy prices in competitive check.

4. Cutting the administrative energy-reporting burden.

Throughout the year, MEUC is planning to run a number of conferences focusing on these specific key issues. Indeed, our Spring Roadshow events in Bolton, Birmingham and London in May, will debate these issues in detail with contributions from users, suppliers, government departments and consultants.

Demand reduction

Despite the Energy Act seeking to drive major changes to provide stability and confidence in the energy

market, businesses and the general public fear the opposite. Public confidence is at rock bottom and newspaper headlines questioning generation capacity, storage and infrastructure investment, only give credence to fears of blackouts.

It is and will remain vital, that investment in the energy mix continues. That mix should enable Britain to be guided into an affordable and secure low carbon future, but demand-side response solutions will go a long way to easing concerns over the 'energy trilemma' – security of supply, cost and environmental impact.

MEUC believes a key driver to persuading the management boards of major organisations to adopt positive reduction measures is for them to be offered incentives, assistance and, above all, encouragement. Some suppliers are seeing demand reduction as a positive and, where there is potential for flexibility in production processes, to negotiate supply contracts to optimise these approaches.

Getting the best out of TPIs

TPIs, or consultants as many know them, are a growing sector of the energy market, particularly now with many boardrooms accepting they need advice and help making changes.

However, there are concerns that some consultants are unqualified to deliver the services needed, or lack the necessary experience to provide sound, practical advice. In some cases, there have also been questions around transparency of fees and partnerships with suppliers.

To assist members in making an educated choice, we are offering independent advice on choosing a consultant and providing a 'what to watch out for' guide. Our experts will also offer assistance on evaluating contracts and their performance in terms of service, cost and purchasing competency.

Keeping energy prices in competitive check

With prices constantly moving ever upward, it is vital for many large consumers to ensure their costs are kept as low as possible. This is vital when operating in the international market and competing for business with overseas suppliers.

We will be supporting these organisations using targeted campaigns pressing the Government to ensure a level playing field across Europe on prices and supporting members to produce an energy budget. We will also be seeking to influence the Treasury on its increasingly prevalent policy of incorporating non-commodity cost rises, mainly in the form of 'green' taxes.

Cutting the administrative burden

One of the biggest concerns facing large consumers is the myriad of reporting schemes they are expected to undertake. These include Carbon Reduction Commitment, Greenhouse Gas Emissions and the latest one in the pipeline - the Energy Saving Opportunity Scheme. Not only do we believe they take up a lot of valuable staff time and expense, but many also overlap with and contradict each other.

During the year MEUC will be pressing Government to re-open negotiations with the head of the Better Regulation Commission with the single aim of significantly reducing and simplifying the bureaucratic burden.

We believe that combined, these measures will go some way to keeping the lights on.

For further information contact: ab@meuc.co.uk

A LEVEL PLAYING FIELD IN EU ENERGY COSTS

Tata Steel's Head of Public Affairs, Tim Morris, explains why action on the UK's escalating green levies and Europe's emissions framework is so important.

For the last six months there have been encouraging signs of the UK economy recovering from the harshest business environment most of us have ever experienced. This is very welcome but, as Bank of England Governor Mark Carney has pointed out, the recovery does not look particularly balanced or sustainable. UK manufacturing activity remains 7% below pre-crisis levels, construction – the biggest steel-consuming sector – 11% below.

The financial crisis has been hugely destructive for steel and other foundation industries, which employ almost half a million UK workers and are responsible for 30% of the country's exports. Some 10,000 foundation industry businesses (steel, glass, chemicals, cement, etc.) have ceased to operate. Tata Steel's European workforce has fallen by about a quarter in the last five years as a result of depressed European steel demand that remains 30% below pre-recession levels.

And it gets worse. Manufacturing jobs and investment have been hit by a double whammy as energy costs have spiralled upwards. According to a recent survey by nPower and EEF, since 2002 the industrial price of gas has increased by 122%, while industrial electricity prices have increased by 94%. Electricity prices for large consumers in the UK can be 50% more than those paid by their competitors elsewhere in Europe.

For a sector like steel that is subject to intense global competition and where energy costs can make up a third of the cost base, energy and resource efficiency is an absolute imperative. This goal has long been pursued: overall energy usage by the UK steel sector has fallen by 40% over the last 40 years. The scope for further improvement has now become very limited. So, while we continue to pursue the last remaining improvement opportunities as well as step changes through the development of breakthrough technologies in the current business environment, competitive pricing of the energy we buy is particularly critical.

There are structural drivers behind the increases to wholesale energy prices based on the global price of oil, interconnectors, storage etc. However, the major and most immediately addressable competitive concern for energy intensive sectors has been the explosion of large UK-only green charges on energy bills – used to subsidise energy generators – that create huge competitive distortions.

Charges of this sort make up around 20% of Tata Steel's total UK spend on electricity. But our French or German competitors are exempt from such charges or have significant compensation schemes in place. UK steelmakers cannot pass these extra charges on to their customers because steel can be sourced from those same competitors, or from further afield.

The Budget

The March Budget Statement built on the Government's acknowledgement last year of the risks carbon taxes pose for foundation industries. The Chancellor's introduction of compensation for the Renewables Obligation (RO) – the biggest green cost on Tata Steel's energy bill, amounting to around £30m last year alone – was the most significant measure. Much credit is due to the Department of Business for getting behind British industry in making the case within Government. Yet the costs of the RO remain and they will more than double

over the next two years before the Government estimates it will receive European 'State aid' approval to make the compensation available. We will be supporting Government in their efforts to secure State aid at the earliest possible date.

Looking at the global picture, European steelmakers already face higher energy costs than their overseas competitors (witness the industrial revival taking place in the USA because of cheap shale gas). This global disparity in costs will grow when the European Commission starts withholding free emissions permits from Europe's best performing steelmakers.

Those who formulate climate change policy right across Europe seem to ignore three facts about the steel sector: that the emitting of carbon is unavoidable using current integrated steelmaking technology, that steel made in Europe is on average the most CO2-efficient in the world, and finally – as mentioned earlier in the case of the UK – that abatement by the lowest carbon emitters in the European steel industry has almost reached its technical limit.

For further carbon abatement to take place, the blast furnace – a machine perfected over the last 150 years of intensive use – will need to be replaced. No technology has yet been developed that might enable this to happen. Attempts to develop such technologies – led by the European steel industry's ULCOS (Ultra Low CO2 Steelmaking) consortium – are underway: one of the most advanced pilot plant projects is taking place at Tata Steel's main Netherlands site. But proving such technologies at scale takes years and is extremely expensive. Even if breakthrough technologies were proven, it would take at least a couple of decades to convert the many thousands of blast furnaces around the world to the new technologies – each at a cost in the hundreds of millions of pounds.

These cost and timing issues lie behind European steelmakers' profound concerns that EU carbon reduction targets are unachievable for the steel sector. They explain why steel industry leaders are frustrated by a 'one size fits all' policy approach which fails to take into account differences between sectors.

Faced with this situation, some might be tempted to throw in the towel and conclude that the loss of steelmaking in Europe would be acceptable collateral damage in the fight against global climate change. But this would be to ignore the damage to the economy that would result.

Steel is a foundation industry, supporting myriad manufacturing and construction supply chains. Without a domestic steel industry, the UK's steel consuming sectors would themselves be chronically weakened, for example because they would not get the same level of service and technical support for innovation that a domestic supplier can offer. Steel and other foundation sectors are also valuable contributors to the UK's 'knowledge economy' – we employ 500 apprentices in the UK, for example, and recently signed a strategic research partnership with the Engineering and Physical Sciences Research Council.

Giving up Europe's steel industry would also have serious environment consequences. Steel products that are essential to modern life would continue to be used in the UK, but would be made by less efficient producers overseas leading to higher global emissions. Steel is also vital for the development of a low-carbon economy, such as offshore wind towers, each of which typically uses more than 1,000 tonnes of steel. And steelmakers are developing innovative steels for carmakers which are thinner, lighter and stronger, leading to more fuel-efficient vehicles.

So foundation industries are essential to a lower-carbon, rebalanced and competitive manufacturing economy capable of winning the Global Race. To ensure this support structure is sustainable long-term, there is much more that policy makers in the UK – and right across Europe – need to do to create the right conditions for long-term investment and growth, including the development of realistic sector-specific low carbon roadmaps.

Fig. 1. Photo by Bill Jacobus

UNFOLDING THE FUTURE

David Workman, Director General at the Confederation of Paper Industries, looks at how the industry is working together for the future

In common with all energy intensive industries, Europe's pulp and paper manufacturers face two barriers to global competitiveness: the growing disparity between gas and electricity costs here in Europe, and the rising cost of emitting carbon as the EU heads toward its target of reducing such emissions by 80% by 2050.

It was for this reason that the Confederation of European Paper Industries (CEPI) decided to commission a 2050 Roadmap. This was the first major industrial sector to do so, and its "unfold the future" report was published just over two years ago.

Its central conclusion was that the industry could not get more than half-way towards achieving the 80% target even if all of Europe's 950 mills invested in the latest known technology and adopted best environmental practice. Its future as a major European industrial sector looked to be in jeopardy unless it could find a different way of operating and, at the same time, improve its profitability.

Two Team Project

The industry took the brave decision to put competitive hostilities to one side and set up what became known as the 'Two Team Project'. CEPI brought together academics, scientists, suppliers and industry experts and split them into two competing teams charged with the task of finding breakthrough technologies that would deliver an 80% reduction in carbon emissions and a 50% increase in value added.

The initial obstacles were legal ones, and lawyers were therefore heavily involved in putting this project on a sound footing, particularly in relation to the thorny issue of intellectual property rights.

Once these issues had been resolved, the two teams set about their work. This involved extensive desk research, travel and interaction with other industrial sectors – notably steel and the chemical and food sectors. After all, there was no point in reinventing the wheel! It was also perhaps not surprising, given the paper industry's close association with forestry, that Mother Nature was also brought into the scope of this study.

It needs to be borne in mind that the last technological breakthrough came some twenty years ago with the invention of the shoe press; before that you need to go back to the 1920s to find previous breakthroughs – so the challenge was immense.

For two years, these teams assessed nearly 60 ideas in total. These were whittled down to eight which were then put before a judging panel to pick a winner. This proved to be very difficult as all the final concepts had merit and by common consent exceeded all expectations.

Innovations

The winning concept involved the use of Deep Eutectic Solvents (DES). This is truly a groundbreaking discovery. DES are produced by plants, and their use in pulp and papermaking could well open up the way to produce pulp at very low temperatures and at atmospheric pressure. They could also be used to recover cellulose from waste and dissolve ink residues in recovered paper – two highly significant potential by-products of this discovery.

Other potential innovations suggested possible ways of making paper using steam rather than water and using supercritical CO2 as a drying agent in the same way that the food industry uses it. In addition, by converting to electricity from renewable sources for heat production, the industry would not only significantly reduce its emissions but could act as a support mechanism to the grid by

Deep Eutectic Solvents

WINNER

A ground-breaking discovery:
Deep Eutectic Solvents (DES), produced by plants, open the way to produce pulp at low temperatures and at atmospheric pressure. Using DES, any type of biomass could be dissolved into lignin, cellulose and hemicellulose with minimal energy, emissions and residues. They could also be used to
recover cellulose from waste and dissolve ink residues in recovered paper.

storing electricity in the form of hydrogen or pulp.

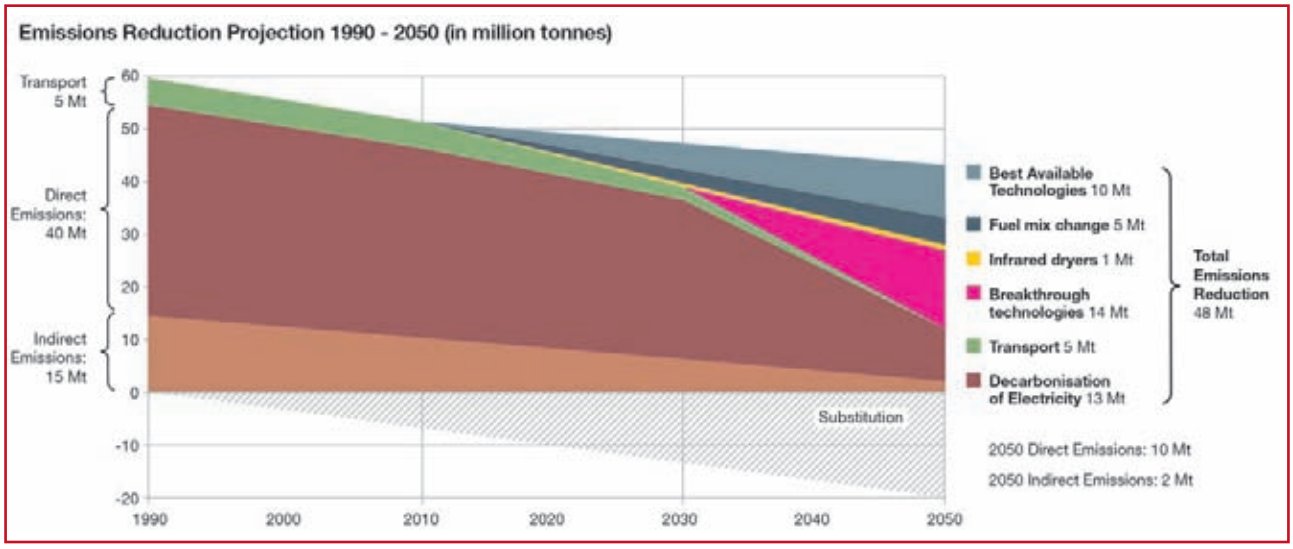
Papermaking is not just energy intensive, it is also capital intensive. A number of the projects also concluded that the mill of the future could be built at a fraction of today's cost and be located just about anywhere; currently mills need to be close to a source of water.

These are extremely exciting times for our industry, but we need to be careful about getting carried away. In all cases, much more time consuming research needs to be carried out and demonstration plants built. This will take time – something that we do not have a lot of. If the 2050 target is to be hit, then any technological breakthrough will have to be a commercial proposition by 2030 at the latest - only 16 years away. Our investment cycles can be between 20 and 30 years, so deploying new technology needs to happen now.

What lessons can we learn?
Firstly, that the more minds you pull together the greater the expertise at your disposal. Secondly, if industry seeks to improve its competitive position using the old tried and tested methods it will probably fail. We already operate very efficiently in terms of energy consumption, use of recycled fibres as a raw material and in mill manning levels. Thirdly, it is possible to think the impossible - to come up with revolutionary concepts to meet the challenges of resource scarcity and carbon constraint.

However, there is one important lesson that our legislators need to learn: it is counterproductive to keep hitting industry with more green targets, taxes and levies. All that does is impede competitiveness and force industry to relocate to less regulated parts of the world. What is really needed is access to development funding, because none of the projects resulting from this exercise are going to be brought to market unless they receive support – both continued support from the paper companies and from EU R&D or innovation funds.

Copies of the final Two Team Project report can be obtained from CEPI – www.cepi.org or from CPI– www.paper.org.uk.



ETS COMPETITIVENESS: A COST-BENEFIT ANALYSIS

Dr Meloria Meschi, Managing Director of Economic and Financial consulting at FTI, looks at the benefits of carbon leakage exemptions

The EU Emission Trading Scheme (ETS) covers power generators, manufacturing sectors and, since 2012, airlines.

The aim of the ETS was to achieve decarbonisation at the lowest abatement cost to the EU economy. By imposing the same unit cost on all emitters, the scheme was meant to ensure that those companies and sectors that have the lowest-cost abatement technology would choose to abate, resulting in an efficient allocation of resources.

This is not what happened. The majority of the manufacturing sectors –representing 95% of industrial emissions – are exempted from the ETS: they receive free permits. The rationale for the exemptions is to avoid carbon leakage, defined as EU producers losing competitiveness and relocating to competing countries with laxer environmental regulations.

In addition, a number of countries offer state aid to the exempt sectors to compensate for the indirect costs of the ETS. Indirect costs arise as power generators pass on the costs of the permits they have to buy through higher prices. A number of EU countries, including the UK, have allocated funds to this type of aid.

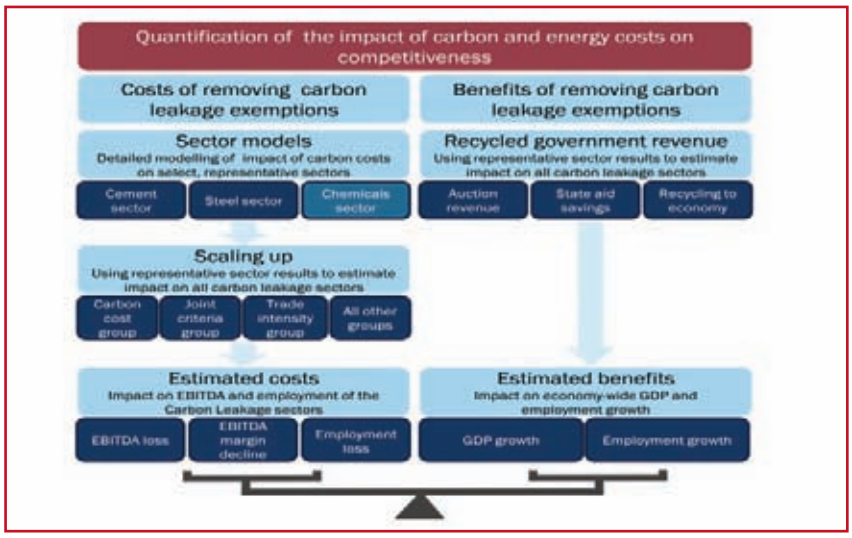


Fig. 1

The free permits and the state aid that the carbon leakage sectors receive to protect their competitiveness redistribute economic rents to these sectors from other parts of the economy: non-exempt sectors and households. A recent study by FTI Consulting estimates that removing these exemptions and subsidies could benefit the EU economy [1] to the tune of between €1.2 billion to €43 billion - between 11,000 and 600,000 additional jobs.

Competitiveness should not be assessed in relation to a few sectors; it should be analysed in the context of the whole economy, assessing the aggregate costs and the benefits of removing the ETS exemptions and subsidies. While policy discussions have centred on the competitiveness of a few sectors (chemicals, steel and cement), it is crucial to understand the EU-wide costs and benefits of ETS exemptions and their impact on the EU's competitiveness as a whole. Additionally, competitiveness should be analysed utilising a

broader framework that takes account of the multiple factors that impact competitiveness beyond production costs.

The study is a cost-benefit analysis: the costs of removing carbon leakage exemptions are analysed for three sectors (steel, cement, and chemicals) and scaled up to the whole of the carbon leakage sectors; the benefits to the whole EU economy are then considered (Fig. 1.)

Costs of removing carbon leakage exemptions

The ability of an industry to support the costs of the ETS, without a significant loss in international competitiveness, is dependent on a number of factors including:

- intensity of rivalry amongst firms
- buyer power
- supplier power
- threat of new entrants
- threat of substitutes

Taking all these factors into account, the study modelled the impact of carbon costs on the cost structures and production volumes of the typical EU plants in the steel and cement sectors. These results, coupled with those from a case study for the chemical industry, were then scaled up to the whole of the carbon leakage sectors.

Benefits of removing carbon leakage exemptions

If exemptions were abolished, the carbon leakage sectors would need to purchase permits at auctions from the non-exempt sectors. The revenue that would accrue to the government, plus the savings from abolishing state aid to these sectors, could be earmarked for other projects and channelled back to the economy. These two sources of government revenues would need to be offset by the decline in tax receipts that result from the sizeable decline in the EBITDA of the carbon leakage sectors.

The study assumes that the saved funds are earmarked to R&D and clean-technology according to the European Commission's six "Priority Action Lines" for investment, or channelled back to the manufacturing sectors, and calculates the net benefit to the EU economy from such investments.

Quantification of costs and benefits

The study considered nine possible ETS scenarios depending on the cost of a permit (the carbon price) and the percentage of permits that would be auctioned.

At one end of the spectrum, an ineffective ETS with high compensation would imply a carbon price of €5/t, with only 34% of permits auctioned. At the opposite end, 100% of permits could be auctioned at a price of €40/t: this would be an effective ETS with no compensation.
A mid-way scenario, i.e. a moderately effective ETS with medium compensation, would see a carbon price of €20/t and an auctioning percentage of 70%.

After taking into account the multiplier effects as both costs and benefits channelled through the economy, the study estimates that there would be net benefits to the EU economy ranging between €1.2 billion and 11,000 additional jobs for the ineffective ETS with high compensation, and €43 billion and 600,000 jobs for the effective ETS with no compensation.

Conclusions

Competitiveness is a whole-economy issue and it is crucial to understand the EU-wide costs and benefits of carbon leakage exemptions. Our study found that only a few sectors and plants with particular technologies or particular locations in the EU would be significantly impacted if they had to pay for carbon costs. The benefits of phasing out compensation for carbon leakage are a net increase in European GDP and jobs and a lower cost of decarbonisation.

Carbon Price	Auctioning percentage		
	34%	70%	100%
€5/t	Ineffective ETS with high compensation	Ineffective ETS with medium compensation	Ineffective ETS with no compensation
€20/t	Moderately effective ETS with high comp.	Moderately effective ETS with med. comp.	Moderately effective ETS with no comp.
€40/t	Effective ETS with high comp.	Effective ETS with medium comp.	Effective ETS with no comp.

Fig. 2. Possible ETS scenarios, depending on the cost of a permit (the carbon price)

[1] The study was based on the whole EU economy, not on any individual country. It did not and was not meant to consider the distributional implications of GDP and job losses and gains across the countries of the EU, industrial sectors, or workers' skills.

INTERVIEW WITH NEIL PARISH MP

PGES' Treasurer considers international and domestic threats to the UK's energy security, and explains what the Government is doing to address them

Neil Parish is MP for Tiverton and Honiton, a member of the Environment, Food and Rural Affairs Select Committee and Treasurer of the Parliamentary Group for Energy Studies. Before his election in 2010, he was a farmer and Member of the European Parliament (MEP) for the South West for ten years, where he was Chairman of the Agriculture and Rural Development Committee.

What do you consider the most important energy issues facing the country, and your constituents?

The UK faces severe challenges to our energy security. About a fifth of power stations are due to close within this decade and we are becoming more dependent on fossil fuel imports at a time of rising global demand and increased resource competition. Russia's decision to raise the price of gas for Ukraine by 80% shows how energy security can so easily become hostage to geopolitical considerations. Long-term planning and policy discipline will be vital if we are to keep the lights on in 50 years' time.

For my constituents the main concern surrounding energy is affordability. Many of them live in older houses that are hard to insulate, and many more use very expensive off-grid energy, such as heating oil. The Government has made some positive steps by cutting the taxes that add to energy bills by an average of £50, simplifying tariffs, and increasing competition in the market.

I believe that the roll-out of smart meters in homes has the potential to fundamentally change how we use energy and the relationship between supplier and consumer. It will allow consumers to make intelligent and informed choices about their energy usage.

What do you consider the greatest achievements of the Energy Act, and what do you think it will mean for the UK's future energy security?

I believe nuclear energy will play a key role for our future energy security. The creation of the Office for Nuclear Regulation, I believe, will give investors and the public the confidence that this technology is properly regulated.

However I think the greatest achievement of the Act is the reforms to the electricity market. New independent energy supply companies are beginning to threaten the monopoly of the "Big Six", with 18 new retailers whose market share has more than doubled since 2010.

As it stands, a fifth of our electricity capacity available in 2011 is set to close over the coming decade. At the same time demand for electricity is expected to double from its current level by 2050. We will need unprecedented levels of investment in the UK electricity sector over the coming years if we are to keep up.

You are an active campaigner on fuel poverty. Can you unpack for us what you think the main causes of fuel poverty are, and how you feel this significant challenge can be addressed?

There are a number of factors that contribute to fuel poverty. Lack of competition in the energy market has had a part to play. The energy supplier base shrunk from 15 majors in 2000 to just the "Big Six" by 2010. The green levies

that aimed to cut our emissions have also driven up gas and electricity bills. Devon is home to many pensioners who are already struggling with their bills and are not getting the support they need.

However, some causes of fuel poverty are dictated by the location and type of home you live in. In 2010, around 18% of households in rural areas were in fuel poverty compared with 16% of those in urban areas. Households in rural areas are more likely to be off the gas grid and therefore more reliant on potentially more expensive fuels such as heating oil and solid fuels, than those in urban areas.

There has been significant movement from the Government in terms of fuel poverty. We're cutting the taxes that add to energy bills by an average £50, simplifying tariffs, and increasing competition in the market. Almost 3.5 million people switched electricity suppliers last year, and independent suppliers gained 20% of switchers.

Also, customers on a low income or in a hard-to-insulate property, of which there are many in Devon, may be able get additional support through the energy company obligation. DECC are also consulting on changes to the energy company obligation that will drive greater delivery to off-gas households and make it easier for suppliers to deliver to rural areas.

Can you give us an overview of the function of the 1922 Committee, and your role and responsibilities on it?

I am Chairman of the 1922 Backbench Environment Policy Committee, which plays a significant role both in policy formation and acting as a channel of communication between backbenchers and ministers. I sit on the Policy Commission currently examining Energy Policy for the 2015 Conservative Party Manifesto.

Given this role, where do you think the Government could be bolder?

There is a real need to utilise shale gas whilst ensuring that the structures are in place to mitigate any negative effects on communities and landscapes. There should also be a much more comprehensive system for large-scale energy producers to compensate local communities. I have been speaking to several renewable energy companies about what models they use to provide community benefits, and whether there are wider lessons to be learnt.

The Energy and Climate Change Select Committee recently announced an Inquiry into "small nuclear". Given your interest in nuclear power, do you think this is a worthwhile line of inquiry?

I will be watching how the Inquiry progresses with interest. We will have to examine new technological developments if we are to move to a low carbon economy, and small nuclear has the potential of providing energy whilst reducing the impact of capital costs.

Do you agree that the potential role of tidal power in the UK energy mix doesn't really seem to be afforded consistent consideration by DECC?

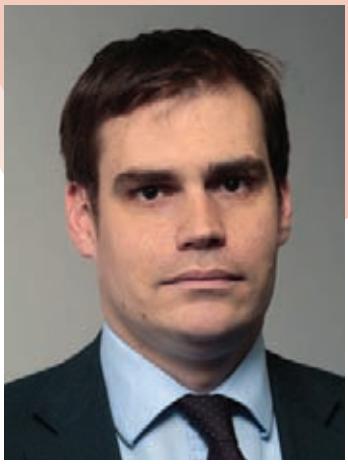
Yes. As an island nation it should be one of our strengths. I have long been a supporter of utilising tidal power along the Severn. I also believe tidal power has a role to play alongside flood mitigation and waterways management. The recent floods in the Somerset Levels show that there is a strong case for a tidal sluice on the mouth of the River Parrett, and if we could also utilise tidal flow for hydroelectric power then it makes such a project more affordable.

A 2011 DECC/Defra paper was subtitled "a commitment to increasing energy from waste through anaerobic digestion". Do you think this is a credible goal?

As a farmer myself I've always had an interest in the potential for on-farm anaerobic digestion as it utilises animal manure, slurry and biodegradable household waste to create energy whilst the remaining organic matter can be spread on the land as fertiliser.

However, there is a lack of conviction from the Government in their support for anaerobic digestion. The Anaerobic Digestion Strategy and Action Plan does not give a roadmap to increase energy from waste nor does it set specific targets for the adoption of anaerobic digestion. The Government must set credible goals for this technology so we can hold them to account and measure their success or failure in reaching these goals.

AGENDA 2015: YOUR BRITAIN - LABOUR PARTY ENERGY POLICY



JANUARY SPEAKER MEETING: Address to the Parliamentary Group for Energy Studies

By Tom Greatrex MP, Shadow Energy Minister

Britain's energy market does not work in the interests of the consumer, and it needs to change. That was Labour's conclusion more than two years ago when our analysis found that the industry was typified by a lack of competition, a lack of transparency and a lack of fairness.

In response to that assessment, we considered a package of policies designed to reform and re-set the wholesale and retail markets so they could lever in much needed investment, but do so while consumers felt that they can trust their suppliers. When the Government first introduced the Bill which was eventually to become the 2013 Energy Act, we warned that whilst many of the measures were welcome and would enjoy our support in principle, the Government had failed to address the questions of vertical integration, market liquidity or price transparency.

We voted in favour of the Bill at Third Reading, relatively unusual for the principle Opposition Party, but pushed a number of amendments which we felt would address the transparency deficit in the market. We supported, and continue to support, the mechanisms of Contracts for Difference and a capacity mechanism, along with other aspects of the Bill. While the detail of the operation of these instruments is still to be confirmed in secondary legislation, we remain supportive of their introduction as a way of helping to attract long-term investment. Our plans to reset the market are supplementary to EMR, and addressing those issues the Government chose to ignore.

Energy bill freezes

At our Party Conference in September 2013, Ed Miliband announced Labour's plans to freeze energy bills for 20 months while reforms are made to an energy market which is not functioning properly. The price freeze – for a defined, specific and limited period - is a policy which has undoubtedly caught the attention of the public who no longer feel that this is a market that works in their best interest. By contrast, David Cameron's hastily packaged series of cuts to green and social levies left profits intact, the prospects of schemes like ECO in tatters, and consumer bills higher than they were before the autumn.

But the level of attention focussed on the price freeze can give the misleading impression that it is Labour's only offer on energy policy. Instead, the price freeze is formulated with the intent of facilitating the market reset proposals, which we have advocated over the last two years. It is a way of putting the market up on blocks whilst we get to work under the bonnet.

Those policies, which began life as amendments and contributions

	Market price paid by First Utility (p/kWh)	Average price paid by 'big 6' (p/kWh)	Markup (p/kWh)	Markup %
2010	4.6	5.97	1.37	30%
2011	4.5	6.34	1.84	41%
2012	5.55	6.14	0.59	11%

Fig. 1: Supplier buying patterns

to debates on the Energy Bill are now the backbone of our "Powering Britain" Green Paper, represent a fundamental overhaul of the market to ensure it is clear, fair and transparent.

Ring-fencing supply and generation

The first step is to introduce a ring-fence between the supply and generation arms of the energy companies, requiring separate reporting and management structures. Vertical integration confers an unfair advantage on those large suppliers that new entrants to the market find impossible to match. Massaging activity between two aspects of a business allows those companies to benefit from the advantage of an uneven playing field.

Perhaps more importantly, vertical integration also dilutes the incentive for the supply side of the business to seek the lowest possible price on the wholesale market. Because these companies are so heavily invested in the generation business, they benefit from a higher price in the wholesale market. In some cases, they will self-supply, buying energy direct from themselves. In other instances, the generation business will indirectly benefit from a large supplier that is prepared to pay high in the wholesale market and increase prices across the board.

When Labour examined the wholesale buying patterns of the Big Six as compared to an independent supplier with no stake in the generation business, we found that the independent had consistently bought their energy far cheaper than the vertically integrated companies (Fig. 1).

Introducing a clear division between the supply and generation arms of the energy companies is a measure designed to tackle this stark lack of competition. This is augmented by our second key policy, which is the requirement that energy trading is through an open exchange. At present, the equivalent of just 6% of electricity consumption volume is traded this way. Instead, the vast majority is traded through bilateral, over-the-counter deals.

By moving the vast majority of the volume off the exchange, these deals damage liquidity in the wholesale market. In addition, they make price discovery – a vital piece of information for the regulators - extremely difficult to determine.

Replacing Ofgem

Finally, we have proposed the scrapping and replacement of the current regulator Ofgem. Time and again, this institution has shown that it is simply not up to the job of safeguarding competition and the interests of consumers in this market. Our proposal is to introduce a new regulator, one with the wherewithal to ensure that this market is both fair and competitive.

In November, we combined these policies into our Green Paper on energy sector reform. There are other policies – such as the creation of an Energy Security Board – which have joined these three core policies and now represent Labour's 10 point plan for market reform.

We are currently engaged in an extensive process of consultation on this paper, and the response from many in the industry at our willingness to engage has been positive, with many broadly supportive of the reform proposals we have set out. Some of our proposals, such as the ring fence for vertically integrated companies, appear to be gaining significant traction. I would encourage all members of PGES to use the link on the Your Britain website to submit written responses for the "Powering Britain" paper and contribute to our developing thinking on these reforms.

The Your Britain website can be found at www.yourbritain.org.uk

NUCLEAR: SUPPLYING THE SKILLS NEEDS OF THE UK

FEBRUARY SPEAKER MEETING: Address to the Parliamentary Group for Energy Studies

By Adrian Bull, Director of External Relations, National Nuclear Laboratory

Part of the UK National Nuclear Laboratory's (NNL) remit from Government is to help safeguard some of the strategic nuclear skills in the industry – in particular, high-level technical skills. Within NNL, the company's workforce have a combined experience of over 10,000 person-years all across the nuclear industry.

NNL was formed from the R&D division of British Nuclear Fuels Limited (BNFL) when it was broken up in the mid-2000s. The NNL is now a Government-owned, government-operated (GO-GO) business, operating on a commercial basis with no direct government funding. The company turns over around £90 million each year, working with a large number of customers from across the UK's nuclear industry and – increasingly – overseas.

One significant characteristic of the nuclear sector in the UK and elsewhere is that recruitment peaked during the 1970s and early 80s, and then dipped dramatically as the scope of work stabilised following Three Mile Island in 1979 and then, more dramatically, Chernobyl in 1986. As a result, there is a significant body of the industry's current workforce who joined the industry around that time and who are now approaching retirement.

The challenge of replacing those people, whilst retaining the bulk of their knowledge and insight, would be substantial in any event, given the scale of the UK's cleanup and decommissioning programme and the operational needs of our operating reactors. The fact that it falls at a time when the industry is facing some significant expansion opportunities only adds to the scale of the task.

As the current fleet of reactors continues to operate, EDF Energy will be looking to extend the lifetimes of many of these plants over the coming decade; there is a massive programme of nuclear new build planned across several sites, there is work ongoing to identify a site for a Geological Disposal Facility, and there is a wide range of international opportunities emerging for the UK industry to share its skills abroad as other countries recognise the breadth, depth and quality of our experience base.

Combining these factors illustrates the tremendous challenge faced by the UK industry, but also the massive opportunity created for the UK to replenish its nuclear workforce with a new generation of bright, talented and enthusiastic young people.

This challenge is being addressed by a number of activities in the industry, not least the excellent work being done by the National Skills Academy for Nuclear (NSA-Nuclear) to bring in the right numbers of people with the

right skills, and to have skills and experience recognised across the sector. NNL is working closely with the NSA-Nuclear and The University of Manchester's Dalton Nuclear Institute to look specifically at high-level skills and those highly experienced and specialised individuals we call "Subject Matter Experts". These are the people who may have 20-30 years' experience in their niche technical field and without whom the industry could not continue to function so effectively.

One example to illustrate this is in the area of graphite in nuclear plants. The UK has a fleet of Advanced Gas-cooled Reactors (AGRs) which have graphite cores within which the fuel assemblies reside. The blocks of graphite which make up these cores experience very high temperatures and tremendously high radiation exposure over a period of decades, and over this time the properties of the material can change significantly due to loss of the graphite from the body of the blocks, making them less dense.

A detailed understanding of the process of graphite material loss and its impact on the physical and other properties of the material is crucial to being able to make any safety case for possible extension of the operating lifetime of such plants. We cannot look overseas for this capability, as only the UK has adopted this graphite-based design, so as an industry we are reliant on a small number of highly experienced experts. At one time, we might have believed that the experts would not retire until the stations were closed but – as further lifetime extension becomes a possibility – we need to consider how to refresh this capability once our current experts are no longer working. We are therefore looking at ways to train up the next generation of experts in areas such as this, so that they can accumulate as much insight as possible in a relatively short period of time. This means selecting people with enough relevant experience to be able to take on board this learning, yet still with enough of their career ahead of them that they can use it most effectively. It can also mean thinking differently about the way in which research projects are designed.

Fig. 1: The NNL is working with other organisations to harness and share the wealth of specialist knowledge contained within the nuclear sector. Transfer of knowledge to younger generations is particularly important to ensure the long-term success of the UK nuclear industry

Rather than having a project which is solely focused on delivering a particular technological development, we are thinking now about configuring projects primarily to share as much relevant knowledge and expertise as possible between the older experts and younger members of the project teams. The actual technology developed can be seen almost as a by-product of the shared learning.

In many key areas, one barrier to doing such work at all is the absence of suitable research facilities and in this respect, the recent announcements by government of significant investment in UK nuclear research facilities is a most welcome positive step. Recent announcements have included £15 million for the new National Nuclear Users Facility, £5 million for the commissioning of NNL's "Phase 3" hot-cells at our Central Laboratory in Cumbria and £8 million for a Nuclear Fuel Centre of Excellence, to be hosted jointly between NNL and The University of Manchester's Dalton Nuclear Institute.

In short – although the challenge is a significant one, there are many positive steps being taken at all levels to ensure that the industry, working with academia, the National Nuclear Laboratory and other bodies, is well-placed to meet it.

NUCLEAR: SUPPLYING THE SKILLS NEEDS OF THE UK

FEBRUARY SPEAKER MEETING: Address to the Parliamentary Group for Energy Studies

By Charles Bray, Regional Manager, National Skills Academy for Nuclear

The National Skills Academy for Nuclear (NSA-Nuclear) is the lead strategic skills body representing the nuclear industry in the UK. Launched in 2008, it followed four years of consultation and planning with the nuclear industry to find the best way to deal with skills issues that were becoming increasing problematic. The basis of these skills issues are an ageing demographic, an increasingly fragmented industry following the break-up of the Central Electricity Generating Board (CEGB) and British Nuclear Fuels Ltd, and barriers to the mobility of the nuclear workforce and encouraging new entrants (individuals and companies) to work in the nuclear industry.

NSA-Nuclear's objectives can be grouped into four key areas: Employer Engagement, Resource Capability, Resource Capacity and the development of a High Quality Provider Network.

Catalyst for Change

The skills challenge facing the nuclear industry has been growing steadily for over 30 years. Considerable progress has been made to address them in the last six years, since the formation of NSA-Nuclear. As anticipated by many in industry and government, NSA-Nuclear has proven to be a very effective catalyst for change. The range and extent of these changes are testament to the support given by the nuclear industry, its desire to continually improve, and the value it places on the professionalism of its workforce.

Nuclear Professionalism

Safety – of both the nuclear workforce and the general public – is a key priority of the nuclear industry. The UK has a very good nuclear safety record, investing considerable time and money to ensure safety is constantly reviewed and improved. The safety of the industry is dependent on the competency of its workforce. Competency in the nuclear industry is defined as the product of a person's skills, experiences, knowledge and attitude. The Nuclear Institute's (NI) 'Nuclear Delta' articulates the professional requirements for working in the nuclear sector; a collaboration between the NI and NSA-Nuclear has built on this to embed it into a model for developing Nuclear Professionals.

High Quality Training Provider Network

NSA-Nuclear has created a network of High Quality Training Providers, the membership of which includes employers, universities, Further Education colleges and Private Training Providers. The network covers a broad range of provision, from fundamental training up to MSc level. Investments have also been made to create regional flagship centres in Cumbria, Somerset, Wales, Durham and Scotland.

Industry-wide training standards

Significant work has been undertaken on the creation of industry-wide training standards to support transferability across the industry and to reduce the amount and cost of duplicate training. NSA-Nuclear works closely with Cogent (the sector's skills council), the nuclear industry and the High Quality Training Provider Network to create training standards and qualifications. Recent examples include the Triple Bar (TB) suite of fundamental training, the Award for Nuclear Industry Awareness, NVQs, Human Performance standards and the Certificate of Nuclear Professionalism.

Nuclear Skills Passport

Launched in 2011, the Nuclear Skills Passport provides a secure platform for the verification and recording of nuclear training. It aims to reduce costs by streamlining the current paper-based process, increase workforce mobility between sites, and support performance improvements by demonstrating achievement of nationally recognised training.

Expansion into manufacturing

NSA-Nuclear Manufacturing was established to address specifically the issues faced by manufacturing and engineering companies wanting to access the nuclear market. It is a collaboration with the Nuclear Advanced Manufacturing Research Centre and Semta, helping companies identify and meet skills needs to make them more competitive via programmes such as TB Nuclear Manufacturing and RCCM.

Collaboration with other stakeholders

Government and industry have created two important forums: the Nuclear Industry Council (NIC) and the Nuclear Energy Skills Alliance (NESA). The NIC is a strategic body looking at a range of issues facing the nuclear industry. NSA-Nuclear co-chairs the skills workstream of the NIC. NESA operates at the tactical level, helping to deliver the strategies of the NIC. A recent output of this group was the creation of the Nuclear Workforce Model, which is helping to identify current and future skills pinch points and appropriate remedial action. The ageing demographic within specialist workers in the nuclear industry known as Subject Matter Experts (SME) is an area of concern: the National Nuclear Laboratory (NNL), NSA-Nuclear and Dalton Nuclear Institute are working collaboratively to develop a pipeline of SMEs for the future.

Projects in progress

NSA-Nuclear is currently working on a number of developments, via the National Nuclear Gateway Programme (NNG) project, which aim to deliver transformational growth in the UK nuclear sector by equipping businesses and their supply chain contractors with the right skills at the right level and at the right time to deliver the UK nuclear programme.

Fig. 1: Paul Howarth, Managing Director of the National Nuclear Laboratory, and Jean Llewellyn OBE, Chief Executive of NSA-Nuclear, sign a Memorandum of Understanding confirming their collaboration on SME development.

NNG includes the development of a competency framework and a tool to manage the assessment, recording and verification of competence. The implementation of this will create a best practice benchmark and an effective means to support employers seeking to record the experience and competence of their staff. Atkins Global has played a key role in the development of the competency framework, gifting the methodology they used during the development of their own in-house MySkills competency framework system. NSA-Nuclear are now working with the wider industry to develop taxonomies in the area of EC&I, Mechanical Engineering, Project Management and Nuclear Safety. This culminated in an industry pilot of the competence methodology and system in March.

NNG also includes the development of an online learning portal, which was launched in 2013 and will become the main repository of online learning and teaching resources for the nuclear industry.

The examples highlighted in this article give a good flavour of the range of activities helping with the constant evolution of nuclear professionalism. With current nuclear operations, decommissioning, and the welcome developments in the new build programme, combined with the real possibility that three new build projects with different reactor technologies could overlap, NSA-Nuclear and its partners need as much notice on timelines and skills requirements as possible to make sure the maximum benefit is derived from all the hard work and investment to date.

NSA-Nuclear is a not-for-profit membership funded organisation. We are an employer-led organisation with strategic guidance and governance coming from our National Board which is composed of senior executives from across the nuclear industry. Members are also able to contribute at a regional level through steering groups, working groups and meetings. The NNG online learning portal can be found at www.nucleartrainingnetwork.com

NUCLEAR: SUPPLYING THE SKILLS NEEDS OF THE UK

FEBRUARY SPEAKER MEETING: Address to the Parliamentary Group for Energy Studies

By Andrew McFarlane OBE, Technical Director, Atkins Nuclear

Atkins is one of the world's leading design, engineering and project management consultancies with over 17,000 employees worldwide, of whom more than 10,000 are in the UK. We have over 600 staff in our nuclear business (part of an integrated energy business), but have access to many more technical staff from the rest of the group to deliver nuclear work. We are at the forefront of the nuclear renaissance, having provided business-critical engineering solutions to the nuclear sector for four decades, in the UK and overseas.

Atkins has taken a lead in addressing the UK nuclear skills challenge, not only developing tools and approaches for internal use, but working closely with the National Skills Academy for Nuclear (NSA-Nuclear), to share these across the industry.

The skills gap

Cogent has published a number of reports from its skills research programme and developed a nuclear workforce model. From the published analysis, around 24,000 people are employed by the nuclear operating companies in the UK, supported by a further 20,000 in the nuclear supply chain. More than 70% of this community are technical, professional or managerial staff. The age profile results in a requirement to recruit around 1,000 people per year. While many of these must be new graduates and apprentices, the size of this challenge means that experienced technical staff must also be recruited from other UK industries, as well as from other EU countries, and globally.

The consultancy sector

Recognising the variability in demand for specialist skills, the UK nuclear operators are increasingly partnering with strategic technical suppliers. There is currently a demand for up to 3,500 engineers in nuclear consultancy, and the nuclear new build programme will increase this to around 6,000. The main requirement is not for deep specific nuclear expertise, but rather for good quality general technical and engineering skills, which must nonetheless be applied appropriately in a nuclear context.

The nuclear delta

The Nuclear Institute has identified the distinguishing characteristics of nuclear professionals. They must understand nuclear safety and security culture and the basic principles of nuclear physics, have a commitment to exemplary personal behavioural safety, and have a broad understanding of the nuclear industry.

People-centric competence

The nuclear industry rightly places a high value on competence. The traditional approach is role-centric, ensuring that all those in safety critical roles are suitably qualified and experienced persons (usually abbreviated as SQEP). The focus is on the role, and on training or developing people to fill each role. This approach is appropriate for stable programmes, such as operating established plants. But in more dynamic environments, whether decommissioning old infrastructure or constructing new plants, a people-centric approach is more appropriate.

This recognises that competence is a function of skills, experience, knowledge and attitude. Atkins has developed an IT 'app' called MySkills: an easy-to-use interface to a skills and knowledge database. Using MySkills, individuals undertake a structured self-assessment against a standard taxonomy. This is then reviewed and the scores agreed before being made accessible on the database.

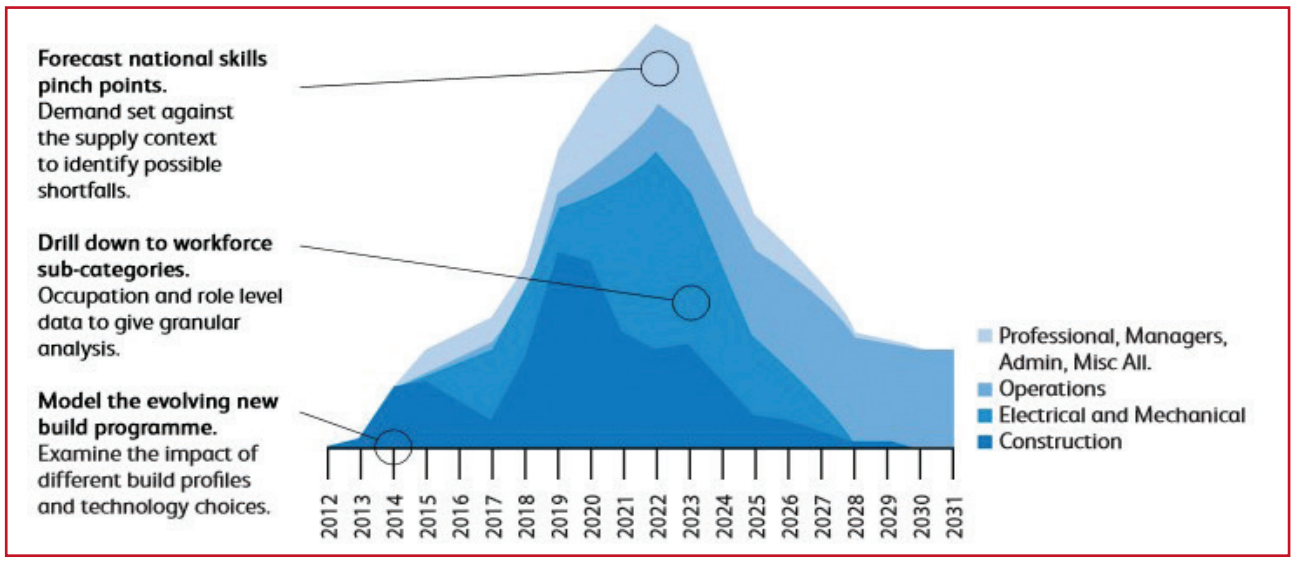


Fig. 1: Cogent SSC has developed a Nuclear Workforce Model (NWM) to provide a comprehensive and flexible view of future requirements. A key feature of the NWM is the ability to dynamically generate future skills scenarios, providing demand and supply data which will inform potential interventions

This people-centric approach enables:

- Identification of people with the required combinations of skills, experience and knowledge for particular tasks, using a powerful search function.
- Team or whole-business competence assessment, identifying strategic gaps to be addressed.
- Allocation of the most competent people to the most technically challenging tasks.
- Identification of personal development needs, matching individual aspirations to business needs.
- Comparison of competence against a role profile, objectively identifying gaps.

The outcome of a people-centric approach is that resource is used more flexibly and as a consequence more efficiently by optimising the utilisation of staff.

Standardised competence database across industry

While the use of MySkills has benefited Atkins and its clients, there would be much greater benefit from the wider application of this approach. If a standardised database was shared across industry then a nuclear operator could search for staff in all organisations that it has partnered with, to identify where the required skills are available. Atkins has supported the NSA-Nuclear to progress this through the National Nuclear Gateway Project (co-funded by the UK Commission for Education and Skills). To be effective it requires:

- An agreed taxonomy of skills and knowledge.
- Quality control of all input to the database.
- A link to the National Skills Passport.
- A link to Licensees' SQEP assessment processes.

Focused provision of training

Academia is the primary source of development of skills, which are honed through on-the-job experience. Industry must set the context for the deployment of these skills in the nuclear environment. The Atkins Training Academy (ATA) is focussed on preparing and developing new and experienced engineers, addressing the nuclear delta. We use external training providers where we can, partner with academia where appropriate, and sometimes develop and deliver courses in-house. Many ATA courses have subsequently been made available across industry through our innovative industry-academia relationship with the University of Central Lancashire.

Engage Globally

The theme of this speaker meeting is the skills demands of the UK. But now that nuclear is a global industry, skills are mobile, and to meet the UK demands it is essential to engage globally. Atkins' nuclear business has a strong overseas focus. Not only is this good business, but in developing staff by broadening their experience overseas, it enables us to better supply the skills demands of the UK. The publication of the Nuclear Industrial Strategy and its implementation by the Nuclear Industry Council are significant and welcome steps. In particular, while welcoming appropriate inward investment, we should facilitate this through the use of UK skills where available, but benefit and learn from the deployment of overseas skills where this is necessary. We must use this as a springboard to develop our nuclear export offerings, which in turn will benefit the UK nuclear industry, and the economy.

GETTING THE JOB DONE

Ian Graves, Power Director at Costain, looks at what it will take to secure a reliable electricity supply

With a quarter of the UK generation operating in 2010 due to close by 2020, all of us in the power sector are keenly aware of the challenges we face in replacing the existing power infrastructure. It is estimated that £100-110 billion capital investment will be required, of which £35 billion is needed to update electricity networks.

Networks underpin our ability to deliver the security of supply, low carbon generation and affordability that leads to economic growth. But rather than discuss the danger of the lights going out, let's look at what we need to do to ensure a secure and reliable electricity supply system.

Investment

Around 50% of the anticipated investment in the transmission networks is driven by the need to connect new generation. Due to uncertainty around UK energy policy, energy market reform and capital availability, investors have delayed decisions to invest in new power stations and wind farms. This, in combination with a review of transmission business plans and contracts at the start of the regulatory cycle, has resulted in deferment of investments over the past year.

This sets a challenge for the companies building new capacity. New lines and cables will have to be installed in a shorter time period, yet it is difficult to invest in increased resources when current work volumes are at best, flat. What we need is a joined-up energy and infrastructure policy in which companies can make long-term investment decisions. In the short term, innovative ways to increase existing network capacity and quickly ramp up technical resources will be required.

Skills shortages

The transmission and distribution sector recruited heavily in the 1970s and 80s, providing resources predominantly to manage existing assets through the 1990s until now. Because of the resulting age profile, significant numbers of staff are expected to retire over the next ten years.

Apprenticeships and other schemes to develop the necessary skills are being put into place. But in the short term, UK companies will have to find alternatives if the programme is to be completed by 2020.

One solution being used by companies like Costain is to form collaborative working relationships with UK and European companies which can provide the mix of resources we need in terms of both equipment and people. This not only offers economies of scale but will help raise UK skill levels and capability in the longer-term.

Streamlining processes

We need early contractor involvement and to simplify the procurement and planning processes to improve the time to construction. Legal and contractual frameworks need to focus on the programme and the process for delivery instead of what happens if something goes wrong.

Design and engineering

We have introduced many onerous standards and construction requirements in the UK, so often we do not benefit from standard designs and materials used in countries where the volume of infrastructure growth is driving innovation and lower-cost supply chains. We need to reconsider whether all these standards adopted in the UK are really necessary.

Conclusion

For good reasons we have delayed investment decisions and developed complicated processes to be followed before we can build infrastructure in the UK. Now we need to start making decisions so we can put the resources in place, and focus on getting the job done.

For more information email:
power@costain.com
Follow us on Twitter:
@CostainGroup

EXTRACT FROM THE BUDGET STATEMENT

The Rt Hon. George Osborne MP, Chancellor of the Exchequer, 19th March 2014

Modern infrastructure is part of a successful economy.

So too is a modern industrial strategy.

If Britain isn't leading the world in science and technology and engineering, then we are condemning our country to fall behind.

So we will establish new centres for doctoral training, for Cell Therapy and for Graphene – a great British discovery that we should break the habit of a lifetime with and commercially develop in Britain.

To make sure we give young people the skills they need to get good jobs in this modern world, we've doubled the number of apprenticeships and I will extend the grants for smaller businesses to support over 100,000 more.

And we'll now develop new degree level apprenticeships too.

A resilient economy is a more balanced economy with more exports, more building, more investment – and more manufacturing too.

We've got to support our manufacturers if we want to see more growth in our regions.

To those who say manufacturing is finished in the West, I say: look at America, which will see up to five million new manufacturing jobs by the end of this decade.

I'll tell you why. US industrial energy prices are half those in Britain.

We need to cut our energy costs. We're going to do this by investing in new sources of energy: new nuclear power, renewables, and a shale gas revolution.

We're going to do this by promoting energy efficiency.

Today, by tilting the playing field – extending the 2% increase in company car tax in 2017-18 and 2018-19 while increasing the discount for ultra low emission vehicles – and reducing the rate of fuel duty on methanol.

But above all we are going to have a £7 billion package to cut energy bills for British manufacturers – with benefits for families and other businesses too.

First, I am capping the Carbon Price Support rate at £18 per ton of CO2 from 2016-17 for the rest of the decade.

This will save a mid-sized manufacturer almost £50,000 on their annual energy bill.

And it will save families £15 a year on their bills too – over and above the £50 we've already taken off.

Second, I'm extending the existing compensation scheme for energy intensive industries for a further four years to 2019-20.

Our steel makers, chemical plants, paper mills and other heavy energy users make up 35% of our manufacturing exports and employ half a million people. This scheme helps the companies most at risk of leaving to remain in the UK.

Third, I'm introducing new compensation worth almost a billion pounds to protect these energy intensive manufacturers from the rising costs of the

Renewable Obligation and the Feed-In Tariffs.

Otherwise green levies and taxes will make up over a third of their energy bills by the end of the decade.

Fourth, I am exempting from the carbon price floor the electricity from Combined Heat and Power plants which hundreds of manufacturers use.

And this entire package delivered without any reduction in the investment in renewable energy.

Today I have cut the cost of manufacturing in Britain.

Half of the firms that will benefit most are in the north of England. A third are in Scotland and Wales.

Thousands of good jobs protected.

A more resilient economy.

A government on the side of manufacturers.

A Britain that makes things again.

The full Budget Statement can be found at https://www.gov.uk/government/speeches/chancellor-george-osbornes-budget-2014-speech

EXTRACT FROM SECURING BRITAIN'S ENERGY FUTURE

The Rt Hon. Ed Davey MP, Secretary of State for Energy and Climate Change, 19th December 2013

Over the next decade we need tens of billions of pounds of investment in new energy generation and networks if we are to replace the old and dirty infrastructure set to close.

If we are to persuade investors, not just in the UK but around the world, to invest here, they need to see that there is a political consensus on these issues that rises above the normal everyday party politicking.

[On climate change and green growth,] my focus next year will be to accelerate the preparations in the UK and in Europe for the crucial 2015 summit in Paris. The lack of an existing global deal should not be an excuse for failing to act at a national or regional level now. I consider this action to be imperative, not optional. Today, 40% of our electricity comes from coal. 20% is from old nuclear. Much of that is due to come off-line in the next decade.

Investment is now flowing in the UK which will boost energy security, reduce reliance on imported fossil fuels, and support up to 200,000 jobs by 2020. We must step up the integration and interconnection of European energy markets so that countries can buy clean, competitive, low carbon electricity from wherever it is cheapest.

That means across Europe we must fully implement the EU's energy liberalisation legislation by the end of next year and facilitate investment in the physical links that make the interconnections possible. It just doesn't make sense for Europe to fail to leverage the potential advantage of a single energy market – we must get real about cross-border infrastructure, and fast. We must, for example, look again at the unbundling rules that are blocking investment from many major financial institutions.

I'm convinced connecting the UK better into a better functioning European single energy market would spur greater competition in our electricity markets – and provide a real boost for consumers and industry. We must set a climate and energy framework for 2030 and reform the EU ETS to give investors a stronger, more certain carbon price signal.

That may seem odd to some, as it itself may well increase the price of energy for some – but compared to the shale gas price effect, hardly at all. And pricing carbon better would stimulate the types of investments that will help make us more competitive and more secure on energy in Europe than we are now.

We must develop strategies and invest more and urgently in focused R&D and innovation for Europe's energy intensive industries.

We should use the Transatlantic Trade and Investment Partnership and other negotiations to promote greater international trade in energy, including encouraging the US to export more of its gas.

Not least because the UK is well placed to benefit from such an eventuality as our capacity to import gas has increased five-fold in the past decade. But ultimately, unless the potential of home-grown electricity and gas production is unlocked, in the UK and across Europe, we won't see downward pressures on prices strong enough to offset fast rising demand.

And that includes unlocking the potential for European shale gas – the inevitable fifth element of a strategic response to American shale gas.

The full speech can be found at www.gov.uk/government/speeches/securing-britains-energy-future

EXTRACT FROM SCOTTISH REFERENDUM 2014: SCOTLAND'S CHOICE

The Rt Hon. Alistair Carmichael MP, Secretary of State for Scotland, 13th January 2014

On 18th September this year we will take the most fundamental collective decision that a nation can ever be asked to take. This is a once in a generation decision.

We all put something in and we are all getting something out: the UK is greater than the sum of its parts.

Right now Scotland sees the benefit of this long shared history. Right now, we get the benefits from natural resources like North Sea oil – but we are able to manage the volatility in production and price as part of a much larger and diverse economy made up of 60 million individuals rather than just five.

Our economy comprises four and a half million companies rather than 320,000 – a market with no boundaries, no borders, no customs - but with a stable UK currency that is respected and envied across the world; a single financial system, and a single body of rules and regulations.

Because we share in these benefits, Scotland is best placed to succeed. We are the wealthiest area of the UK outside London and South East, and we have achieved that as part of the UK. And right now, all of this supports jobs here in Scotland.

Jobs in industries as diverse as oil and gas, defence, food and drink and the new and emerging creative industries of the future.

When we have achieved so much through our common values and labour, wouldn't we go on to achieve so much more?

The challenges we face today may be different but they are every bit as demanding as those we faced in the past.

Together, we can afford the subsidies that will bring about a renewables revolution in this country. Cutting carbon emissions, tackling climate change, strengthening the green economy. Together, we can make a bigger impact on global poverty.

Pooling our resources, we have grown our aid budget and become the second largest donor nation in the world today. Together, we can rebalance our economy and become more prosperous.

Growing faster than any other G7 country, becoming the largest EU economy within perhaps just twenty years, providing the financial security that safeguards our banks and secures our currency.

The motivation to prevent climate change, to protect the most vulnerable and to build a strong prosperous and sustainable economy. These values are common across the United Kingdom.

And by staying together, we can build on those values to create a strong and secure future. Why should we now break these things up?

The full speech can be found at www.gov.uk/government/speeches/scottish-referendum-2014-scotlands-choice

DEPARTMENTAL STATEMENTS

Written and Oral Statements from the Department for Energy and Climate Change – 6th December 2013 to 2nd April 2014

Written Ministerial Statement on clean energy infrastructure

12th December 2013 – Michael Fallon MP made a statement on the multi-million pound contract for detailed design and planning, known as a FEED study, to Capture Power Limited for the White Rose Carbon Capture and Storage Project.

Written Ministerial Statement on the discussions at the EU Energy Council

12th December 2013 – Ed Davey MP reported on the discussions, which covered the Proposal to amend the Renewable Energy Directive and the Directive relating to the quality of petrol and diesel fuels.

Written Ministerial Statement on the Energy Efficiency Strategy

16th December 2013 – Greg Barker MP announced the publication of the 2013 Update on the Strategy. The previous year's achievements included extensions in support available to households, simplification of the existing business energy efficiency policy, the establishment of access to new energy efficiency finance routes, and increased Government understanding of energy efficiency benefits.

Written Ministerial Statement on the triennial review of the Civil Nuclear Police Authority (CNPA)

16th December 2013 – Michael Fallon MP said the Review aimed to challenge the continuing need for a non-departmental public body to carry out this role, and to review the CNPA's control and governance arrangements.

Written Ministerial Statement regarding the onshore oil and gas regulatory roadmap

17th December 2013 – Michael Fallon MP followed-up the publication of the Regulatory Roadmap for Onshore Oil & Gas exploration and a Strategic Environmental Assessment by telling the House they represented important steps for onshore oil and gas exploration.

Written Ministerial Statement on progress of the smart meter roll-out

18th December 2013 – Ed Davey MP announced the publication of the second DECC annual progress report on the roll-out of smart meters, which provided the benefits of smart metering.

Written Ministerial Statement on Hinkley Point C State aid

18th December 2013 – Ed Davey MP welcomed the European Commission's investigation into the State Aid case for the proposed Hinkley Point C contract. He said the decision represented an important step forward in progression of the case for Hinkley.

Written Ministerial Statement on the publication of the Electricity Market Reform delivery plan

19th December 2013 – Ed Davey MP informed the House of the Government's publication of the Electricity Market Reform (EMR) Delivery Plan. He said the Plan confirms Government policy on the capacity market reliability standard of three hours loss of load expectation (LOLE), and the Government's intention to introduce competition for more established technologies.

Written Ministerial Statement on a contingencies fund cash advance in 2013/14

19th December 2013 – Michael Fallon MP told the House that DECC required a cash advance of £1.5 million from the Contingencies Fund in 2013/14, to fund the costs of assuming the concessionary fuel allowances of former miners who lost their entitlement in the restructuring of UK Coal in July 2013.

Written Ministerial Statement on the results of the Committee on Climate Change Triennial Review

14th January 2014 – Ed Davey MP said the Review had concluded concludes that the functions performed by the Committee are still required and that it should be retained as a non-departmental public body (NDPB).

Written Ministerial Statement on the 28th offshore licensing round

24th January 2014 – Michael Fallon MP informed the House that he was inviting applications for petroleum licences for unlicensed seaward blocks, in the 28th new round of offshore petroleum licensing.

Written Ministerial Statement on the community energy strategy

27th January 2014 – Ed Davey MP announced the publication of the first ever UK Government Community Energy Strategy. It sets out the role of communities in meeting the UK's energy and climate change challenges, including supporting a sustainable and secure energy system, and lowering consumer bills.

Written Ministerial Statement on indemnification by the nuclear decommissioning authority

6th February 2014 – Michael Fallon MP notified Parliament of a forthcoming Departmental Minute, which would give notice of a contingent liability for the issuing of an indemnity by the Nuclear Decommissioning Authority to the incoming Parent Body Organisation when the competition is completed and the contract awarded. The Minister said he believed there to be a very strong case for this indemnity.

Written Ministerial Statement on the indemnification to ELEXON Ltd

11th February 2014 – Michael Fallon MP informed Parliament of an imminent Departmental Minute which would give notice of a contingent liability for the issuing of indemnity provisions to ELEXON Ltd for actions it undertakes during the settlement system set-up phase for EMR.

Written Ministerial Statement on the supporting independent renewable investment

11th February 2014 – Ed Davey MP announced a consultation on the Government's proposal for an Offtaker of Last Resort mechanism, which will support investment in independent renewable electricity projects.

Written Ministerial Statement on the UK Continental Shelf

24th February 2014 – Ed Davey MP announced publication of Sir Ian Wood's final report on how to maximise recovery of oil and gas in the UK Continental Shelf.

Written Ministerial Statement on carbon capture and storage

24th February 2014 – Ed Davey MP announced the agreement of a multi-million pound contract for engineering, design and financial work on the Peterhead CCS project in Aberdeenshire.

Written Ministerial Statement on the EU Energy Council

28th February 2014 – Ed Davey MP outlined the agenda items for the Energy Council in Brussels on 4 March 2014. These included the Commission's communication on energy prices and costs in Europe, and the Commission's Communication setting out a climate and energy policy framework for 2030.

Written Ministerial Statement on policy responsibility for energy-using products

3rd March 2014 – Prime Minister David Cameron MP confirmed responsibility would transfer from the Defra to DECC. This responsibility includes, but is not limited to, the UK's interests in the IEA Implementing Agreement on Energy Efficient End-use Equipment (4E) and the Super-Efficient Deployment Initiative.

Written statement to Parliament on the EU Energy Council

11th March 2014 – Ed Davey MP reported on discussions at the Energy Council in Brussels on 4th March. He said the majority of member states accepted that renewable energy subsidies should be rationalised as part of the State aid modernisation process but were concerned that there was a risk of contradiction between European energy policy and the State aid guidelines.

Oral Statement to Parliament on competition in the energy markets

27th March 2014 – Ed Davey MP's statement accompanied the publication of the Ofgem, OFT and CMA Annual Assessment of Competition in the Energy Markets. He said the report found five areas of "real concern" in Britain's energy markets, ranging from a low level of trust and lack of engagement from consumers to geographical concentration of providers and "tacit co-ordination between energy companies" that includes a strong alignment of pricing announcements in timing.

Written Ministerial Statement on the thermal analysis review

31st March 2014 – Ed Davey MP told Parliament his department had completed a thorough evaluation of the Nuclear Decommissioning Authority's Radioactive Waste Management Directorate's corrected figures following the discovery of a modelling error in their assessment of the on-site cooling time required for spent fuel from new nuclear reactors before it could be placed in an off-site Geological Disposal Facility (GDF). There was no substantive impact on policy or previous decisions.

Written Ministerial Statement on the completion of the Triennial review report

31st March 2014 – Michael Fallon MP announced the completion of the Nuclear Liabilities Financing Assurance Board (NLFAB), saying it had concluded that the functions it performed are still required and should be retained.

Written and Oral Statements from the Department for Communities and Local Government

Written Ministerial Statement on local planning

6th March 2014 – Nick Boles MP said the Government is incorporating previously published guidance on renewable energy (including heritage and amenity) into its National Planning Policy Framework, and making it clearer that visual impact is a particular factor for consideration in relation to solar farms.

PARLIAMENTARY RECORD

SELECT COMMITTEES: REPORTS AND ENQUIRIES

6th December 2013 to 2nd April 2014

House of Commons

Business, Innovation and Skills Committee

Extractive Industries Sector

4th March 2014 – The Committee took evidence from Susanne Schmitt, Extractives and Infrastructure Manager at WWF-UK, Joseph Stead, Senior Economic Justice Adviser at Christian Aid, Richard Solly, Co-ordinator at London Mining Network, and Alexander Scrivener, Policy Officer at World Development Movement.

Energy and Climate Change Committee

Inquiry into Carbon Capture and Storage

23rd January 2014 – The Committee visited the UK CCS Research Centre's Pilot-Scale Advanced Capture Technology (PACT) shared facilities, based in Sheffield. The Committee also took evidence from a panel featuring Professor Jon Gibbins at University of Edinburgh, Dr David Reiner at the University of Cambridge, Dr Jerome Neufeld at University of Cambridge. A second panel contained Dr David Clarke from the Energy Technologies Institute, Rodney John Allam from NET Power, Chris Hodrien from Claverton Energy Group, and Darren Hopkins from the British Biochar Foundation.

4th February 2014 – The Committee took evidence from Michael Fallon MP and Jonathan Holyoak, Deputy Director at the Office of Carbon Capture and Storage.

Inquiry into Heat

17th December 2013 – Greg Barker MP, Stephen Martin (Director of Heat and Industry at DECC) and David Wagstaff (Head of Strategy and Policy) gave evidence in the final evidence session of this inquiry. Issues considered included the role of building regulations in reducing heat demand, the potential of heat pumps, district energy and CHP, and the potential for energy storage in low carbon heat provision.

Inquiry into Low Carbon Innovation

14th January 2014 – At the inaugural evidence session of the inquiry, Rob Saunders, Head of Energy at the Technology Strategy Board, David Clarke, CEO of Energy Technologies Institute, Professor Jim Skea, RCUK Energy Strategy Fellow and Professor of Sustainable Energy at Imperial College London, and Professor David Fisk from The Chartered Institution of Building Services Engineers gave evidence.

26th February 2014 – The second session of the inquiry featured contributions from RenewableUK, SSE, EEF and the UCL Institute for Sustainable Resources. A second panel featured Joe Corbett from Friends of the Supergrid alongside representatives from the Mineral Products Association, EDF and the UK Hydrogen and Fuel Association.

Inquiry into the IPCC 5th Assessment Review

28th January 2014 – The first evidence session examined the reliability of climate models used by the Intergovernmental Panel on Climate Change (IPCC), and the organisation's structure and practices. Professor Sir Brian Hoskins from Imperial College London, Professor Myles Allen from Oxford University, and Dr

Peter Scott from the Met Office made up the first panel. They were followed by author Donna Laframboise, climate researcher Nicholas Lewis, and Professor Richard Lundzen from MIT.

11th February 2014 – The Committee continued, looking at IPCC communication, media and controversies and national and international policy considerations. Representatives from the Royal Society, the Royal Meteorological Society and Policy Exchange gave evidence.

Tuesday 11th March 2014 – The third evidence session looked at climate change mitigation and adaption strategies, and the use of climate models for policy, with evidence from DECC heavyweights: Professor David MacKay, Chief Scientific Adviser, Professor Sir Mark Walport, Government Chief Scientific Adviser, Greg Barker MP and David Warrilow, Head of Climate Change and International Evidence.

Power disruption due to severe weather evidence session

21st January 2014 – The Committee held a one-off session to investigate the causes of power outages over the festive period. Witnesses included the Chief Executives / Managing Directors of the seven Distribution Network Operators (DNOs). A second session featured Hannah Nixon, Senior Partner for Distribution, and Andrew Wright, interim Chief Executive of Ofgem. Chair of the Committee, Tim Yeo MP, consequently wrote to the Secretary of State recommending that firms who fail to restore power within a stated timeframe be fined.

Inquiry into Small Nuclear Power

4th March 2014 – The inquiry invited responses to, among others, questions regarding the potential of small nuclear power and the barriers to developing and deploying it more widely. The Committee also asked what Government and regulators could do to ensure small nuclear forms part of the UK's future energy mix.

Evidence session with Sir David King

20th March 2014 – The Committee took evidence from Sir David King, the UK Special Representative for Climate Change, on the ambitions of his role, climate diplomacy in key countries, and the expectations of next year's COP 21 in Paris.

Environmental Audit Committee

Inquiry into Progress on Carbon Budgets

13th December 2013 – The Committee published the Government's response to its report. The Government said it would review progress towards the EU emissions goal in early 2014, and confirmed it would continue to argue for an EU move to a 30% target for 2020.

Inquiry into Energy Subsidies in the UK

3rd March 2014 – The Government's response to the Committee's report was published. The Government agreed there is a lack of consensus over what constitutes a subsidy, and confirmed its policy is to incentivise the energy industry to bring forward investment where there is a market failure. The Government also reaffirmed it does not believe it has any harmful energy policies.

Inquiry into Green Finance

6th March 2014 – The Committee published its report, which argued there is a "green finance gap". The Committee called on the Government to accelerate progress of green finance schemes and monitor its impact.

Inquiry into Growing a Circular Economy

18th March 2014 – The Committee launched an Inquiry into the potential economic value of resources contained in "waste", and the benefits of alternate business models including leasing and design for re-use.

Science and Technology Committee

Inquiry into Women in Scientific Careers

6th February 2014 – The Committee published its report, which deemed it "astonishing" that, despite clear imperatives and multiple initiatives to improve diversity in STEM, women still remain under-represented at senior levels across every discipline. The authors said efforts to inspire young girls are wasted if women are then disproportionately disadvantaged in scientific careers compared to men. The report concluded that existing biases and working practices result in systematic and cumulative discrimination against women throughout STEM study and academic careers. (HC 701)

Inquiry into Climate: Public understanding and its policy implications

2nd April 2014 – The Committee's report argued that Government and the BBC had to do more to clearly and effectively communicate climate science to the public. MPs found little evidence of co-ordination amongst Government, government agencies and public bodies on this.

Welsh Affairs Committee

Shale Gas in Wales

12th December 2013 – The Committee held its final evidence session on shale gas with Minister of State for Energy the Rt Hon Michael Fallon MP, Head of DECC's Office of Unconventional Gas and Oil Duarte Figueira, and CEO of Breitling Energy Companies Chris Faulkner. (HC 731)

House of Lords

Economic Affairs Committee

The economic impact on UK energy policy of shale gas and oil

10th December 2013 – Campaigners against fracking in Lancashire were invited to elaborate on their concern, which included water contamination and earth tremors. Energy advisors were then asked to outline what they considered the likely timescales for shale gas exploration and development in the UK and its predicted impact on the UK's energy mix.

7th January 2014 – Sir David King, Special Representative for Climate Change at the FCO and former Chief Scientific Adviser to the Government, and Professor David Mackay, Chief Scientific Officer at DECC, gave evidence. They were asked if they felt there were lessons the UK could learn from the US experience of shale gas in relation to possible health and environmental dangers, and whether they considered self-regulation of the industry appropriate.

14th January 2014 – This evidence session featured Christopher Wright, US energy entrepreneur and CEO of Liberty Resources, and Alan Seatter, Deputy Director General of Environment at the EU Commission. Mr Wright was about the American experience of shale gas extraction and whether he felt the legal position in the UK, where minerals underground belong to the Crown rather than the landowner whose land they are found below, would affect the development of a productive shale gas industry in this country.

21st January 2014 – Michael Fallon MP and Duarte Figueira gave evidence to the inquiry. The Government representatives were asked what the Prime Minister had meant by saying his administration should be "going all out for shale". They were asked to provide their opinion on why the Environment Agency has not received any applications for permits to hydraulically fracture since the government moratorium was lifted in December 2012, with the Committee hoping to ascertain whether a lack of clear regulations around shale was putting off investors.

28th January 2014 – The Committee took evidence from the Rt Hon Owen Paterson MP, Secretary of State for Environment, Food and Rural Affairs, and Paul Leinster, Chief Executive of the Environment Agency. The Committee enquired about the role Defra and the Environment Agency should play in regulating shale gas development in the UK, and what their priorities are in delivering that regulation. Witnesses were also asked if they felt the opponents of "fracking" have legitimate concerns.

Science and Technology Committee

International STEM students

4th March 2014 – Representatives from several UK universities were questioned on the effect immigration reforms may be having on student numbers. The Committee wanted to ascertain how the numbers of international students enrolling on STEM courses had changed in recent years, and get a sense of how universities assist foreign students in applying.

Scientific Infrastructure

4th February 2014 – The Committee welcomed the Government's formal response to its report on Scientific Infrastructure. The Committee's report, published in November 2013, had argued that the potential and competitiveness of the UK's large-scale scientific resources were being compromised by the lack of a long-term strategic investment plan. In response, the Government said it would establish a Ministerial advisory group on long-term strategy and capital investment. This group will advise Ministers on a strategic roadmap for science and research infrastructure, and on the other detailed recommendations in the Committee's report.

PARLIAMENTARY ORAL QUESTIONS AND DEBATES

House of Commons

Energy intensive industries
Paul Farrelly MP (Lab, Newcastle-under-Lyme)
4th December 2013, Col257WH

Onshore Wind Farms
Sir Alan Beith MP (LD, Berwick-upon-Tweed)
4th December 2013, Col911

Energy Efficiency
Jonathan Reynolds MP (Lab Co-op, Stalybridge and Hyde)
5th December 2013, Col1081

Engineering Skills (Perkins Review)
Peter Luff MP (Con, Mid Worcestershire)
10th December 2013, Col32WH

Energy Bills
Dave Watts MP (Lab, St Helens North)
10th December 2013, Col127

Business Questions: Energy Prices
Paul Flynn MP (Lab, Newport West)
12th December 2013, Col368

Onshore Wind Farms
Steve Brine MP (Con, Winchester)
16th December 2013, Col464

Energy Prices (Scotland)
Mike Weir MP (SNP, Angus)
18th December 2013, Col730

North Sea Oil and Gas
Tom Greatrex MP (Lab Co-op, Rutherglen and Hamilton West)
18th December 2013, Col731

Renewables (Jobs)
Ian Lucas MP (Lab, Wrexham)
8th January 2014, Col283

Co-operative energy
Robert Halfon MP (Con, Harlow)
9th January 2014, Col464

Power Distribution Companies
Albert Owen MP (Lab, Ynys Môn)
9th January 2014, Col464

Shale Gas
Paul Maynard MP (Con, Blackpool North and Cleveleys)
15th January 2014, Col847

Energy Efficiency
Tom Blenkinsop MP (Lab, Middlesbrough South and East Cleveland)
16th January 2014, Col975

Shale Gas
Andrew Jones MP (Con, Harrogate and Knaresborough)
16th January 2014, Col980

Energy Bills
Paul Farrelly MP (Lab, Newcastle-under-Lyme)
16th January 2014, Col982

Renewables Industry
Tim Farron MP (LD, Westmorland and Lonsdale)
16th January 2014, Col985

Energy Infrastructure
Stephen Metcalfe MP (Con, South Basildon and East Thurrock)
16th January 2014, Col986

Renewable Obligations Grace Periods
Dr Alan Whitehead MP (Lab, Southampton Test)
16th January 2014, Col987

Wholesale Energy Market
John Robertson MP (Lab, Glasgow North West)
16th January 2014, Col989

Wave Power
Jessica Morden MP (Lab, Newport East)
16th January 2014, Col993

Energy Intensive Industries
Roger Williams MP (LD, Brecon and Radnorshire)
16th January 2014, Col995

Fracking
Anne McIntosh MP (Con, Thirsk and Malton)
16th January 2014, Col1004

Payment Meters and Fuel Poverty
Fiona O'Donnell MP (Lab, East Lothian)
20th January 2014, Col128

Carbon Capture and Use
Laura Sandys MP (Con, South Thanet)
21st January 2014, Col65WH

Energy Bills
Robert Halfon MP (Con, Harlow)
22nd January 2014, Col300

Engineers
Peter Aldous MP (Con, Waveney)
23rd January 2014, Col434

Oil and Gas Platform Construction
Mary Glindon MP (Lab, North Tyneside)
23rd January 2014, Col436

Business Questions: Renewable Energy
Albert Owen MP (Lab, Ynys Môn)
23rd January 2014, Col449

Energy Prices
Stella Creasy MP (Lab Co-op, Walthamstow)
28th January 2014, Col755

Planning regime for solar PV panels in rural locations
Brooks Newmark MP (Con, Braintree)
29th January 2014, Col980

Business Questions: Ofgem
Tom Greatrex MP (Lab Co-op, Rutherglen and Hamilton West)
30th January 2014, Col1016

Business Questions: Energy Bills
Robert Halfon MP (Con, Harlow)
30th January 2014, Col1020

Business Questions: Energy-intensive industries
Derek Twigg MP (Lab, Halton)
6th February 2014, Col434

Business Questions: Electricity Prices
Paul Flynn MP (Lab, Newport West)
6th February 2014, Col436

Fuel Poverty
Roger Williams MP (LD, Brecon and Radnorshire)
11th February 2014, Col223WH

Energy Companies
Stephen Doughty MP (Lab Co-op, Cardiff South and Penarth)
12th February 2014, Col846

Energy Company Obligation
Lilian Greenwood MP (Lab, Nottingham South)
27th February 2014, Col387

Energy Efficiency
Gemma Doyle MP (Lab Co-op, West Dunbartonshire)
27th February 2014, Col389

Energy Prices
Diana Johnson MP (Lab, Kingston upon Hull North)
27th February 2014, Col390

Community Energy
Duncan Hames MP (LD, Chippenham)
27th February 2014, Col392

Energy Companies: Charges
Rehman Chishti MP (Con, Gillingham and Rainham)
27th February 2014, Col393

Tidal Energy
Eric Ollerenshaw MP (Con, Lancaster and Fleetwood)
27th February 2014, Col395

Smart Meters
Graham Stringer MP (Lab, Blackley and Broughton)
27th February 2014, Col396

Household Energy Bills
Huw Irranca-Davies MP (Lab, Ogmore)
27th February 2014, Col397

Energy Prices
Alison McGovern MP (Lab, Wirral South)
27th February 2014, Col398

Energy Meters
Martin Vickers MP (Con, Cleethorpes)
27th February 2014, Col399

Energy Market Competition
Bob Blackman MP (Con, Harrow East)
27th February 2014, Col401

Energy-intensive industries
Andy Sawford MP (Lab Co-op, Corby)
27th February 2014, Col488W

Energy Supply
Caroline Flint MP (Lab, Don Valley)
27th February 2014, Col489W

Energy: Meters
Liz Kendall MP (Lab, Leicester West)
27th February 2014, Col490W

Nuclear Power Stations
Margaret Ritchie MP (SDLP, South Down)
27th February 2014, Col493W

Energy: Prices
Caroline Flint MP (Lab, Don Valley)
28th February 2014, Col506W

Fuel Poverty
Stephen Gilbert MP (LD, St Austell and Newquay)
28th February 2014, Col507W

Government levies on energy bills
Tim Yeo MP (Con, South Suffolk)
3rd March 2014, Col685

Energy
Mark Hendrick MP (Lab Co-op, Preston)
3rd March 2014, Col704W

Renewable Energy
Julie Elliott MP (Lab, Sunderland Central)
3rd March 2014, Col705W

Eggborough Power Station
Ian Austin MP (Lab, Dudley North)
4th March 2014, Col760W

Energy: Conservation
Dave Watts MP (Lab, St Helens North)
4th March 2014, Col760W

Energy: Consumption
Jim Fitzpatrick MP (Lab, Poplar and Limehouse)
4th March 2014, Col761W

Energy: Prices
Caroline Flint MP (Lab, Don Valley)
4th March 2014, Col761W

Green Deal Scheme
Robert Flello MP (Lab, Stoke-on-Trent South)
4th March 2014, Col761W

Renewable Energy
Stephen O'Brien MP (Con, Eddisbury)
4th March 2014, Col763W

Renewables Obligation
Stephen O'Brien MP (Con, Eddisbury)
4th March 2014, Col763W

Energy Supply
Mike Weatherley MP (Con, Hove)
5th March 2014, Col838W

Energy: Billing
John Robertson MP (Lab, Glasgow North West)
5th March 2014, Col838W

Energy: Meters
Jonathan Reynolds MP (Lab Co-op, Stalybridge and Hyde)
5th March 2014, Col839W

Nuclear Decommissioning Authority
Paul Flynn MP (Lab, Newport West)
5th March 2014, Col839W

Wind Power
Stephen O'Brien MP (Con, Eddisbury)
5th March 2014, Col841W

Electricity: Manufacturing Industries
Nic Dakin MP (Lab, Scunthorpe)
6th March 2014, Col917W

Energy: Conservation
Dave Watts MP (Lab, St Helens North)
6th March 2014, Col917W

Energy: Meters
Graham Stringer MP (Lab, Blackley and Broughton)
6th March 2014, Col917W

Offshore Industry
Alex Cunningham MP (Lab, Stockton North)
6th March 2014, Col919W

Offshore Oil and Gas in the UK Review
Alex Cunningham MP (Lab, Stockton North)
6th March 2014, Col921W

Renewable Energy
David T. C. Davies MP (Con, Monmouth)
6th March 2014, Col921W

Wind Power
Stephen O'Brien MP (Con, Eddisbury)
6th March 2014, Col922W

Electricity: Prices
Nigel Adams MP (Con, Selby and Ainsty)
10th March 2014, Col24W

Energy Company Obligation
Lilian Greenwood MP (Lab, Nottingham South)
10th March 2014, Col24W

Energy Supply
Nigel Adams MP (Con, Selby and Ainsty)
10th March 2014, Col24W

Energy: Conservation
Dave Watts MP (Lab, St Helens North)
10th March 2014, Col25W

Wind Power: Seas and Oceans
Chris Ruane MP (Lab, Vale of Clwyd)
10th March 2014, Col27W

Energy Company Obligation
Lilian Greenwood MP (Lab, Nottingham South)
11th March 2014, Col68WH

Energy-intensive industries
Jessica Morden MP (Lab, Newport East)
11th March 2014, Col170

Electricity
Caroline Flint MP (Lab, Don Valley)
11th March 2014, Col198W

Electricity Interconnectors: Iceland
Jonathan Reynolds MP (Lab Co-op, Stalybridge and Hyde)
11th March 2014, Col198W

Energy
Caroline Flint MP (Lab, Don Valley)
11th March 2014, Col198W

Energy Company Obligation
Caroline Flint MP (Lab, Don Valley)
11th March 2014, Col199W

Energy: Competition
Caroline Flint MP (Lab, Don Valley)
11th March 2014, Col199W

Energy: Meters
Jonathan Reynolds MP (Lab Co-op, Stalybridge and Hyde)
11th March 2014, Col199W

Energy: Prices
Bob Ainsworth MP (Lab, Coventry North East)
11th March 2014, Col200W

Greenhouse Gas Emissions
Caroline Flint MP (Lab, Don Valley)
11th March 2014, Col200W

Natural Gas
Caroline Flint MP (Lab, Don Valley)
11th March 2014, Col202W

North Sea Oil
Andrew Jones MP (Con, Harrogate and Knaresborough)
11th March 2014, Col202W

Offshore Industry
Nicholas Brown MP (Lab, Newcastle upon Tyne East)
11th March 2014, Col203W

Wind Power
Stephen O'Brien MP (Con, Eddisbury)
11th March 2014, Col204W

Renewable Energy: Heating
Roger Williams MP (LD, Brecon and Radnorshire)
11th March 2014, Col204W

Energy Company Obligation
Lilian Greenwood MP (Lab, Nottingham South)
11th March 2014, Col68WH

Energy-intensive industries
Jessica Morden MP (Lab, Newport East)
11th March 2014, Col170

Renewables: Employment opportunities
Caroline Lucas MP (Green, Brighton, Pavilion)
13th March 2014, Col416

Energy Prices
David Heath MP (LD, Somerton and Frome)
13th March 2014, Col416

Green Deal
David Hanson MP (Lab, Delyn)
20th March 2014, Col948

Hinkley Point C
Caroline Nokes MP (Con, Romsey and Southampton North)
20th March 2014, Col1020

Energy Markets (Competition)
Mark Lazarowicz MP (Lab Co-op, Edinburgh North and Leith)
26th March 2014, Col 65WH

Energy Bills
Mary Glindon MP (Lab, North Tyneside)
26th March 2014, Col 345

Green Technologies
Henry Bellingham MP (Con, North West Norfolk)
27th March 2014, Col 454

Smart metering
Ian Liddell-Grainger MP (Con, Bridgwater and West Somerset)
27th March 2014, Col 468

Energy-intensive industries
Andrew Bridgen MP (Con, North West Leicestershire)
27th March 2014, Col 470

Carbon Floor Tax
Tom Blenkinsop MP (Lab, Middlesbrough South and East Cleveland)
27th March 2014, Col471

House of Lords

National Infrastructure Plan
Lord Deighton
4th December 2013, Col238

Energy Prices
Lord Kennedy of Southwark
9th December 2013, Col587

Peatlands
Lord Greaves
8th January 2014, Col1499

Sellafield
Lord Avebury
11th February 2014, ColWA143

Energy: Prices
Lord Stoddart of Swindon
25th February 2014, ColWA240

Sellafield
Baroness Howarth of Breckland
25th February 2014, Col WA255

Energy: Fracking
Lord Bourne of Aberystwyth
3rd March 2014, ColWA280

Energy: Green Deal
Lord Greaves
5th March 2014, ColWA314

Energy: Wind Farms
Lord Moonie
5th March 2014, ColWA314

Climate Change
Lord Donoghue
6th March 2014, ColWA326

Energy: Energy Companies Obligation
Lord Greaves
6th March 2014, ColWA328

Energy: Wind Farms
Lord Moonie
6th March 2014, ColWA330

Energy: Green Deal
Lord Greaves
10th March 2014, ColWA346

Energy: Plutonium
Lord Avebury
10th March 2014, ColWA346

Energy: Fracking
Baroness Byford
11th March 2014, ColWA367

Energy: Green Deal
Lord Greaves
11th March 2014, ColWA368

Nuclear Waste
Lord Judd
11th March 2014, ColWA372

Energy: Fracking
Lord Borwick
17th March 2014, ColGC42

Nuclear Management Partners
Lord Hoyle
20th March 2014, Col272

Green Deal
Lord Greaves
26th March 2014, Col524

LEGISLATION

6th December 2013 to 2nd April 2014

Government Bills

Energy Bill 2012-13 to 2013-14
The Rt Hon. Ed Davey MP,
Secretary of State for Energy and Climate Change

Royal Assent
18th December 2013
Following agreement by both Houses on the text, the Bill became the Energy Act.

Water Bill 2013-14
Owen Paterson MP, Secretary of State for Environment, Food and Rural Affairs

Commons

Committee debate
10th, 12th, 17th December 2013

Report stage
6th January 2014

Lords

First reading
7th January 2014

Second reading
27th January 2014

Committee stage
4th, 6th, 11th February 2014

Report stage
25th, 31st March 2014

Private Members' Bills

Additional Charges for Utility Bills Not Paid by Direct Debit Bill
Robert Halfon MP
(Con, Harlow)

Commons

First reading
11th February 2014

Control of Offshore Wind Turbines Bill 2013-14
Christopher Chope MP
(Con, Christchurch)

Commons

Second reading
17th January 2014

Energy Demand Reduction Bill 2013-14
Sir Andrew Stunell MP
(LD, Hazel Grove)

Commons

First reading
19th December 2013

A LOOK AHEAD

2014 may have started with a new Energy Act, but there is still plenty coming up on the agenda in the next few months.

To start, despite question marks from the European Commission over State aid, EDF has committed to early preparatory work on Hinkley Point C including the creation of access roundabouts, roads and drainage works. The actual investment decision won't be made until later in 2014, but locals will be seeing these developments begin to take shape on the site before summer.

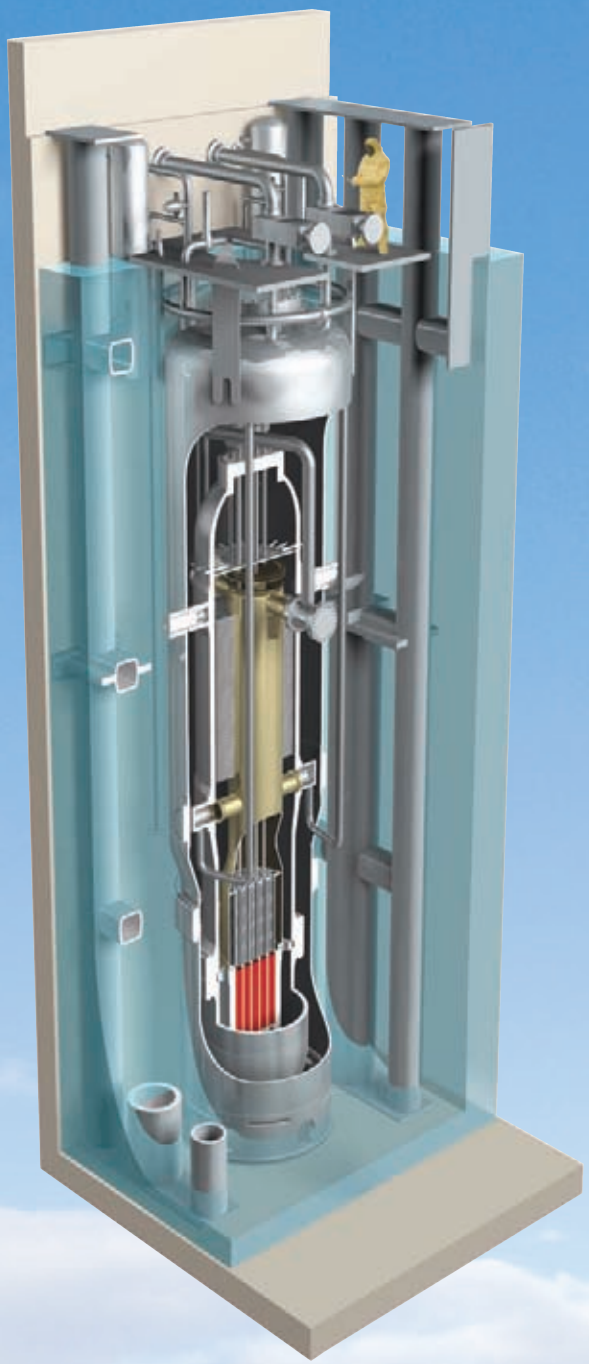
Moving on to policy, the final Contracts for Difference Allocation Framework is expected in June, when it will be published with the EMR regulations. I'm sure many of you are waiting for DECC to publish the Government Response to the consultation on Allocation of Contracts for Difference which is expected in the next few days.

Finally, as DECC finalises the details of EMR, it is also expected to define the future division of the Levy Control Framework (established by DECC and HM Treasury in 2011 in order to cap the cost of levy-funded schemes until 2019) in a consultation this July. This will establish the division of funding between groups of renewable energy technologies and a decision on whether or not the LCF will include other levy-funded schemes such as the capacity mechanism.

So lots to keep the sector busy until our next edition. See you then!

Thinking Big, Building Small

NuScale was recently selected as the sole awardee by the US Department of Energy, in round 2 of the SMR development funding competition. This selection has increased the already-robust market interest in the safest nuclear energy facility ever designed.



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