

Written Statement by Mark Higson for the German Parliamentary Committee on Economic Affairs and Energy hearing (17 June 2015) on:

**Taking action against subsidies for the construction of new nuclear power plants in the EU
Stopping subsidies for the British nuclear power plant Hinkley Point C and taking legal action**

I am an independent consultant with over 20 years' experience of working in government and regulatory bodies on energy matters, including oil and gas development, nuclear development, privatisations, electricity market reform, competition law and economic regulation including price regulation.

Before coming to a view on the motions tabled by the Left Party parliamentary group and the Alliance 90/The Greens parliamentary group, I would invite the Committee to have regard to the following points.

The wider context

I make no secret of my view that reducing global carbon emissions is an issue of the utmost importance to our and future generations on this planet. I support the stance that has been taken by the European Union, and welcome the progress and contribution the United Kingdom has made towards this goal. However, much remains to be done and the task of avoiding damaging and irreversible climate change continues to be daunting. In this context, while of course Member States' actions taken must comply with EU law, I would urge great caution in seeking to oppose or delay measures whose aim and effect is to reduce carbon emissions.

Reducing carbon emissions to meet short and long term targets presents significant difficulties in practice. To reduce emissions in electricity generation, there can be two broad approaches to implementation. One is to act through regulation and mandatory targets with, in effect, the State taking a large measure of control over the direction of the market. The other is to look to the market to give appropriate pricing signals to investors, producers and consumers to influence their behaviour, with State intervention aimed primarily at addressing market failure. The British Government has long placed emphasis on the operation of the market. It has replaced State run monopoly generation and supply with a market based system and now wishes to ensure, through implementing reform, that the market based system delivers the low carbon agenda. Its bold long term vision is one in which low carbon sources of electricity generation compete against one another.

While the action taken on settling a Contract for Difference with EdF, viewed in isolation, implies a high degree of State intervention, it should also be seen as a step on the road to effective competition in low carbon electricity generation. Although the creation of such a competitive market presents significant challenges, there is a good argument that market forces and strong price signals are effective in changing behaviour and stimulating innovation. There is scope for innovation through competition to drive down the costs of low carbon electricity generation, storage and demand side management. Accordingly, when coming to a view on the motions, I would invite the Committee to look not only at the details of the arrangements for Hinkley, but also their wider purpose, and role in longer term market development.

I fully appreciate that nuclear is controversial. I understand and respect the views of those Member States, including Germany, who have decided to meet carbon reduction commitments without new nuclear power generation. I would, however, ask the Committee to seek to keep

separate questions such as the cost of nuclear and justification of State Aid from the wider objections to nuclear power. I am happy to see those wider objections being most vigorously debated, but I would also argue for respect for the position that Member States are entitled to decide to deploy new nuclear power stations as part of their energy mix. Under the Treaty for the Functioning of the European Union (TFEU) Member States have the freedom to determine their own energy mixes. The EU's 2030 Climate and Energy policy restated this right. The Commission's decision on Hinkley is in accordance with a Member State's right to determine its own energy mix.

Summary of the key arguments for supporting the Commission decision on Hinkley

- Hinkley Point C is essential for the UK to play its part in achieving the common EU objectives of decarbonisation and security of supply at the lowest cost to consumers. It represents 7% of the UK's electricity needs and will help replace the UK's existing nuclear fleet and coal plants as these reach the end of their operational lives.
- Hinkley Point C is part of the UK's wider approach to Electricity Market Reform which also supports renewables, energy efficiency and interconnectors alongside nuclear. The UK's approach is compatible with the internal market.
- New nuclear in the UK contributes to achieving diversity of supply as it will provide low-carbon baseload capacity to complement the intermittent and flexible/responsive capacity provided by other forms of electricity generation technologies; and affordability, since including nuclear power in the energy mix reduces the costs of achieving the common EU objectives.
- The use of nuclear power is also consistent with the objectives of the Euratom Treaty which establishes that promoting nuclear energy is an objective of common interest. As a matter of law, the effect of the Euratom Treaty cannot be unilaterally altered by Member States or the Commission and all Member States remain bound by its terms

The State aid decision-making process

The State aid decision-making process is a regulatory process. The Commission's assessment of the UK's support package for Hinkley Point C was judged on its technical merits and found to be in line with State aid rules.

In its Decision (EU) 2015/658, the Commission set out its analysis of the points raised in relation to its preliminary conclusions, and the justification for its final decision. I have reviewed the arguments set out, and believe that the Commission has done its work thoroughly. Of course, if the Commission has mis-directed itself on matters of fact, reasoning or law, then it is right that this should be identified and, if not corrected, subjected to challenge. I am not aware that any argument as to mis-direction has yet been convincingly put forward. In my opinion, the case is legally robust.

I believe that it is important that the rule of law should be respected. I would therefore invite the Committee to review carefully whether the arguments being advanced to oppose the Commission's Decision appear genuinely valid as a matter of law or whether they reflect views on nuclear generally which, though heart-felt, are not valid grounds to oppose the Decision.

Dealing with market failure

Although the UK's long term vision is for competition between low carbon sources of electricity generation, there is currently significant market failure. Unless addressed by appropriate action, market failure constitutes a barrier to investment which would prevent nuclear power from being able to compete effectively in the electricity market. "Business as usual" operation of the

electricity market in the UK will not deliver the objectives of common interest. This analysis was accepted by the Commission in its Decision.

Existing and envisaged EU and UK measures – including the carbon price floor, the EU Emission Trading Scheme, the UK Guarantee Scheme and the UK's Capacity Market – are not sufficient to address the market failures and other factors hindering investment in low carbon generation (including new nuclear) capacity, in the UK.

Market failure can be characterised in a number of ways. In my view there are five relevant factors here:

- i. The value of reduced carbon emissions is an externality whose benefit does not flow fully to investors in low carbon generation. The carbon price in the EU-ETS is not yet seen by potential investors as being high enough or reliable enough to act as a basis for investment decisions.
- ii. Nuclear cannot compete against other forms of low carbon generation if those sources are supported either through obligations on electricity suppliers (as has been the case in the UK in the past) or through CfDs being made available (which is currently the case in the UK following implementation of market reform). This not to object to the support given to renewable generation, which is clearly necessary given point (i) above, but merely to comment that nuclear cannot compete unless there is a level playing field.
- iii. Nuclear investors do not get paid by the market for the full benefits of security and diversity of electricity supply.
- iv. Nuclear investors do not get paid by the market for the full benefits of reducing the costs of future nuclear.
- v. The current state of the financial markets constrains nuclear generators' ability to raise the investment needed.

Many low-carbon energy sources are characterised by high up-front capital costs and are therefore exposed to unhedged long-term wholesale price volatility. The absence of long term price signals for carbon and lack of a sufficiently precise and stable regulatory framework means that investment will not be forthcoming without State intervention. Additionally, nuclear power is exposed to a considerable degree of political risk. While I would not object to a State's right to decide to phase out nuclear, naturally, investors will not be prepared to invest unless they have some clear protection from such a risk.

Absence of nuclear investment in the UK, or delay by many years, would significantly increase the risks of the objectives of security of supply and carbon emission reduction not being achieved in an affordable manner, or not being achieved at all, in the UK.

The Contract for Difference is the ideal instrument in which to intervene in the market. CfDs provide generators with robust private-law contracts and reduce exposure to volatile wholesale prices. They are attractive and bankable for industry, whilst being good value for the UK consumer and more market orientated than other mechanisms operated in the UK in earlier years. There are a number of mechanisms built into the proposed CfD for Hinkley that will prevent what the Commission calls 'overcompensation'. It has been negotiated by experts in the UK Government who understand the commercial and economic realities of investment whilst at the same time ensuring value for money for consumers. This is an important part of ensuring intervention is proportionate.

The UK is facing a looming energy crisis in the next decade if action is not taken. Today, 36% of the UK's electricity comes from coal; 20% is from existing nuclear stations. Most of that is due to come off line in the next decade or so. Nuclear has very long lead times (with planning, site preparation and construction taking the best part of a decade) which requires long-term contracts to be built. These contracts need to start now so that nuclear can play its full part in the 2020s and into the longer term in meeting carbon reduction objectives.

These are the arguments why the UK Government has concluded that state intervention is required to bring forward new nuclear capacity in the UK. The support for the Hinkley Point C project is necessary in order to incentivise investment in a new nuclear power station and ensure the achievement of the objectives of decarbonisation, security of supply and diversity of supply at the lowest cost. This is why action constituting State Aid is necessary.

Comparison of Hinkley Point C costs with other low carbon technologies

I am not in a position independently to assess how the cost of Hinkley set in the CfD compares with other low carbon technologies. There are also difficulties in making comparisons due to the different lifetimes of generating sources, and of the difficulty in assessing future balancing costs attributable to intermittency or inflexibility, particularly as the decarbonisation of electricity generation proceeds. However, I am aware that analysis by the UK Government shows that Hinkley Point C is competitive with other low carbon technologies and gas commissioning on same timescale (2023) in the UK. Comparative figures in 2012 prices are:

UK levelised costs (2012 prices £/MWh)	Hinkley Point C support	Onshore	Solar	Offshore
Total costs	£89.50-£92.50 (€111-€115)	£65-£118 (€81-€146)	£82-£110 (€102- €136)	£108-£163 (€134-€202)

The operational life of Hinkley Point C is expected to be 60 years; only 58% of the life is covered by the CfD of 35 years. This is lower proportion than for renewables (15 years CfD out of 20-25 year asset lifetime (60-75%).

Full waste and decommissioning cost estimates are already built into the Strike Price, so it will be the polluter who pays for these costs. Waste transfer contract arrangements (which are subject to a separate notification to the Commission), will cover the price that EDF will pay the UK Government for the provision of a waste disposal service in the period after decommissioning – but an estimate of the cost is already covered.

The UK is supporting renewables, energy efficiency, demand-side response and interconnection as well as new nuclear. The provision of CfDs for Renewables and the Capacity Market has been approved by the European Commission (in July 2014); a UK policy document ‘More interconnection’ was published in December 2013.

UK's analysis shows that additional deployment of other low carbon technologies at the scale needed in the absence of Hinkley Point C would come at a significantly higher cost to electricity consumers. There is also a limit in the UK to how much renewable deployment is physically possible.

There are, of course, many claims and counter-claims about how costs will move in the future. My own view is that the best result for implementing carbon reduction efficiently and effectively and

at least cost is to develop a competitive market. I see the establishment of electricity market reform in the UK and the bringing forward of Contracts for Difference as an important step forward to achieve this long term vision. If it is true that renewable costs will progressively reduce, and if new nuclear power stations cannot be built reliably to time and to budget, then this will clearly become evident in a competitive market and impact accordingly on technology choice. We should not, however, assume this from the beginning.

Distortions of competition

The wholesale electricity price in the UK market is set by the marginal plant – generally gas or coal fired. Nuclear has high capital but low operating costs. It will therefore run whenever possible, and displace more expensive marginal plant. However, given the prevalence of fossil-fuelled plant, the impact on wholesale prices will be small. The impact of substituting renewable generation for Hinkley, were that to be possible, would be similar.

The CfD instrument itself minimises any possible impacts on competition between generators by preserving NNBG's exposure to market forces and the incentives on EDF to compete in the wholesale electricity market under similar conditions to other operators.

Unsurprisingly, there should be no significant effect of Hinkley on competition or trade between Member States, and the impact on interconnector flows and energy prices in other Member States including Germany should be negligible. This conclusion is supported by the analysis performed by the UK Government, as well as reports commissioned from the UK Government's external advisers and was accepted by the Commission.

There is no EU funding so German or any other EU taxpayers will not pay anything towards Hinkley Point C. It is UK consumers, not taxpayers, who will pay difference payments on top of electricity prices.

Conclusion

In this note I have sought to explain the arguments for my view that the UK Government's offer of a Contract for Difference for Hinkley is both the right way forward to meet the objective of reducing carbon emissions and is compatible with State Aid rules.

While I appreciate that nuclear is controversial, I do not see grounds for the Committee to support the motions tabled today. At an important moment in international climate change negotiations, a challenge to the Commission's Decision on Hinkley risks sending a clear message that reducing carbon emissions is not of paramount importance. It would add strength to those who argue that man-made climate change is unimportant, or not happening, or that action to promote renewables and nuclear is unnecessary and expensive.