House of Lords Economic Affairs Committee Inquiry: The Economics of UK Energy Policy

Submission from the **Energy Intensive Users Group**

Energy Intensive Industries

1. The Energy Intensive Users Group (EIUG) represents the UK's energy intensive industries (EIIs) including the manufacturers of steel, chemicals, paper, glass, cement, lime, ceramics, aluminium and industrial gases. These foundation industries employ 200,000 people directly, support 800,000 jobs including their supply chains, and make a £15bn pa contribution to UK GDP. EIUG has played a significant role over two decades in campaigning for greater liberalisation of UK energy markets, and through IFIEC Europe (the International Federation for Industrial Energy Consumers, of which EIUG is the UK member) for the liberalisation of EU energy markets.

Key challenges for Government over next decade

2. The single biggest difficulty for the Government – and indeed for UK energy intensive industries – is ensuring UK fuel and electricity supplies remain secure and internationally competitive whilst pursuing highly ambitious targets for their long term decarbonisation. Unfortunately, UK electricity prices have become internationally uncompetitive, by a large margin, with large industrial users paying up to 80% more than the EU average for their electricity. The impact of climate policies, and the extent to which their costs affect industrial supplies, is the single biggest reason for the disparity in EU electricity prices. UK gas prices (which are not affected by climate policy costs) are competitive within Europe but it should be noted that European wholesale prices are twice the level of those in the USA, where industrial energy consumers are able to reap the competitive benefits of indigenous shale gas production. Most analysis suggests that the energy market will need to start deploying carbon capture and storage (CCS) within the next decade if the Government's decarbonisation targets are to be met. However, until the Government develops a clear CCS policy and a support mechanism to render investment in CCS viable, it is doubtful that any CCS investment will occur.

Government response to shift in technology and prices

3. It is not yet clear whether the Government has fully faced up to the reality that natural gas will remain a plentiful and highly competitive source of energy for decades to come, and that production is no longer likely to remain concentrated in less stable parts of the world. Technical advances in hydraulic fracturing of shale gas have already transformed the American market (where gas trades at half the price in Europe) and it is entirely conceivable that the UK could also become a significant onshore gas producer, assuming political resistance to the technology does not hinder its development. Competitive gas is helping to displace coal from power generation internationally, which is beneficial in terms of global carbon emissions. This increased the relative cost to consumers of the government's highly ambitious plans for deployment of already heavily subsidised renewable and new nuclear power generation, conceived at a time when the Government assumed oil and gas prices would remain high and on a rising trajectory for the foreseeable future.

Emerging technologies

4. There is scope for emerging technologies to transform the energy markets significantly in next decade, although this is far from certain and will depend in large part on improving their future affordability. Battery storage is already viable for fast response and other premium services and may become competitive for longer range storage in due course, which could significantly reduce

the cost of integration of and reliance on intermittent renewable generation such as wind and solar. Solar costs will probably continue to fall, though perhaps not at the impressive rate recently experienced, although deployment will ultimately be limited in the absence of viable long range electricity storage. In the much longer term is possible that small modular nuclear (an area in which the UK has considerable technical expertise and manufacturing capability) could achieve significant cost reductions, ensuring a sustainable future for low carbon nuclear power generation that is no longer dependent on permanent subsidy.

Roles of the public and private sector

5. EIUG has always supported a market-led energy policy where Government intervention in the contestable elements of the energy markets is minimised, and economic regulation is focused on natural monopoly network functions where consumer protection in the absence of competition is desirable and indeed necessary. Government has a poor record in attempting to 'pick winners' amongst emerging and even mature energy technologies, as the historic record demonstrates. More recently (through measures such as the Renewables Obligation and small scale Feed in Tariff) successive governments have damaged consumer interests by 'picking losers', deliberately directing the largest consumer-funded subsidies towards the least economically efficient means of energy production. EIUG welcomes the steps taken by the current Government to begin the restoration of a competitive energy market and trust, with the Committee's encouragement, that it will continue to pursue market reform towards its logical end, to the benefit of all energy consumers.

6. EIUG accepts there is a role for Government in addressing market failure, including the need to internalise the social cost of carbon associated with energy production. However, in the absence of meaningful global action on carbon emissions, including equivalent pricing of emissions, there are limits to the extent that this can be done on a unilateral basis without compromising the industrial competitiveness. There is therefore a danger of causing carbon leakage, where emissions associated with industrial production and energy use are simply transferred onto other countries' environmental balance sheets.

Attracting Investment

7. In the first instance, the Government should address barriers to energy investment arising as a direct consequence of their own policy. Most obviously, the UK's unilateral Carbon Price Floor (CPF) is a deterrent to investment in new gas fired power generation (whatever benefit it may have had in encouraging production to switch from coal to gas will be irrelevant after 2025, when coal fired power stations will no longer be operating in the UK). It should be noted that the CPF has failed to provide a bankable incentive for investment in low carbon power generation (which continues to require CFD support), has deterred investment in badly needed new gas fired generating capacity, and distorted trade in electricity with neighbouring markets where generators do not pay CPF.

8. The Government has already tacitly admitted that its renewables policy, although significantly inflating electricity supply prices, has depressed wholesale prices to the extent that new, dispatchable conventional generation is no longer viable without additional support through the capacity mechanism. One solution to this problem is to ensure that intermittent renewable power generators are no longer rewarded for generating when their power is not needed, and that they pay an appropriate contribution to network and balancing costs proportionate to the strain their non-dispatchable output imposes on the system as a whole, on exactly the same basis as any other source of power generation.

Relationship between high energy costs and loss of industrial capacity

8. EIUG has warned the Government for many years about the cumulative impact of cost-raising climate policies on industrial energy prices, the role this has played in triggering plant closures and production cut backs, and in deterring investment to ensure viable future production. Nowhere has this been more clear than in the highly electricity intensive process of aluminium smelting, which is no longer carried out in England or Wales largely as a result of uncompetitive industrial electricity costs. EIUG recognises that Government thinking has shifted considerably in recent years, eventually accepting the need for a compensation package to provide a degree of relief for trade exposed electricity intensive industries, although more needs to be done to achieve a level playing field with respect to EU competitors, let alone those in the USA, China and elsewhere where industrial energy supplies are not materially affected by climate policy costs.

9. BIS published analysis in 2012 showing that electricity price increases for energy intensive industries as a result of climate policies were expected to be larger in the UK than anywhere else in the world. Subsequently, BIS commissioned an updated report on international energy prices from Ecofys, an independent consultant, which was completed in 2015. EIUG understands this report was circulated to ministers and advisers early in 2016, BIS was keen for it to published, but other parts of Government were determined that it should remain suppressed. It would be useful to know whether BEIS is now at liberty to publish this report.

10. EIUG has specifically called for abolition of the UK's unilateral Carbon Price Floor at the earliest opportunity and in any case by 2025 (as mentioned above) to alleviate its damaging impact on energy users. In the meantime, so long as UK power generation remains affected by the EU Emissions Trading Scheme and/or CPF, the Government should continue to press for consistency in the scope of EIIs eligible for relief from the indirect impact of carbon costs with that potentially available for renewable costs, which is not currently achievable under EU state aid rules.

Preparations to cope with risk of shortfall in energy supply

11. EIUG believes the Government needs to place a higher priority on ensuring energy supplies are adequate to meet likely future demand. Demand response can play a useful role in coping with possible shortfalls in supply, especially transient shocks, and a number of energy intensive industries are already involved in providing a range of demand services to assist National Grid and others in providing this. Demand response is not however a substitute for secure generating capacity or physical availability of gas – and cannot be provided on any significant scale by industrial processes that depend on continuous production. Supply shortages also increase the risk of wholesale price spikes that, unlike domestic consumers, have a much more direct and potentially damaging impact on industrial users than on domestic consumers.