Energy Intensive Users Group

British Ceramic Confederation
Chemical Industries Association
British Cement Association
Major Energy Users Council
UK Steel

British Glass Manufacturers Confederation
John Hall Associates; Utilyx
Confederation of Paper Industries
Alcan; Anglesey Aluminium
BOC; Air Products

BERR Consultation on the UK Renewable Energy Strategy – Response from the Energy Intensive Users Group

General Comments

EIUG represents energy intensive manufacturing industries in the UK – producers of steel, chemicals, paper, cement, glass, ceramics, aluminium, industrial gases, etc. – that depend on access to secure, internationally competitive energy supplies to remain in business.

EIUG accepts the need to diversify away from dependence on fossil fuels in order to ensure security of future energy supplies and reduce the CO_2 emissions associated with energy use, where it is practical and cost effective to do so. We do not however accept that such a move should be artificially accelerated in pursuit of arbitrary, politically determined targets of questionable practicality, agreed to with apparent disregard for the economic consequences, whether at a UK or a European level. The adoption of a binding renewable energy target fundamentally undermines the principle that the market should be allowed to determine the energy mix and reduce energy related CO_2 emissions at least cost – a principle that we strongly support – and one that the UK government has been seeking to promote within the EU and beyond.

EIUG very much regrets that the UK government agreed to support the EU 2020 renewable target, ignoring clear advice to avoid doing so from the DTI and others at the time. We are not aware of any credible opinion within the energy industry supporting the view that the UK can – let alone will – meet its proposed share of this target by 2020, even if the negative economic consequences of attempting to do so are entirely disregarded. We note that concerns about the practicality of the UK target are not confined to the energy industry and its consumers, but are also shared by a number of environmentalists (including the government's former Chief Scientific Adviser) whose commitment to action on climate change issues is not in dispute.

EIUG therefore believes the level of UK commitment, if not the EU target itself, should be re-negotiated. But since this may not be possible for political reasons (at least for the time being) it is vital that steps are taken to minimise the adverse consequences for vulnerable energy consumers, including energy intensive industries exposed to international competition. We propose that in line with established practice under the UK Climate Change Levy and EU Emissions Trading Scheme, and with renewable support mechanisms in place elsewhere in Europe, energy supplies to these industries should be exempted from the costs arising from additional measures that may be required to meet our EU obligations, in order to prevent lasting damage to UK competitiveness.

Responses to certain specific consultation questions follow.

Q2: To what extent should we be open to the idea of meeting some of our renewable energy target through deployment in other countries?

> We would support retaining the maximum level of flexibility in meeting our target through deployment in other countries in order to minimise the cost on UK consumers, so long as this does not jeopardise security of UK energy supplies. Analysis by Pöyry Consulting, commissioned earlier this year by BERR, confirms that the cost to the UK and to the EU would be considerably reduced if the opportunity for trade in renewable energy is maximised.
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> Cross border transmission capacity constraints between the UK and continental Europe, and between certain Member States, represent a significant barrier to trade in electricity. Full ownership unbundling of EU transmission systems, subjecting them to independent economic regulation that incentivises investment to relieve constraints, is vital if the single energy market is to become a reality. Greater cross border transmission capacity will help electricity suppliers and system operators to mitigate the risks associated with greater reliance on intermittent renewable generation in locations far removed from demand.

Q3: In the light of the EU renewable energy target, where should we focus further action on energy efficiency and what, if any, additional policies or measures would deliver the most cost-effective savings?

> Progress towards meeting the target will be more rapid if the total level of energy consumption – or at least its rate of growth – can be reduced. Evidence produced at the time of the government's most recent Energy Review suggests that considerable scope remains for cost effective energy efficiency savings, especially in the domestic sector. History suggests these savings may not materialise in response to increasing energy prices to the extent that might be expected on pure economic grounds. This is an area where further mandatory product and building standards, possibly supplemented through direct grants for improvements to existing buildings, may be required if the full energy efficiency saving potential is to be realised.

Q12: What (if any) changes are needed to the current electricity market regime to ensure that the proposed increase in renewables generation does not undermine security of electricity supplies, and how can greater flexibility and responsiveness be encouraged in the demand side?

> Security of supply can be maintained by ensuring that unreliable power generation (such as that from wind) remains subject to imbalance penalties and is required to internalise the cost of backup (including reserve) needed to render it as secure as conventional generation. Producers of unreliable power should also be held accountable for the CO_2 emissions associated with backup.
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> We support an active demand side to the market, and many energy intensive industries already play a role in providing flexible commercial demand response and reserve capacity. However, we would be concerned if routine disruption of industrial supplies became used as a means of managing wildly fluctuating output from unreliably intermittent renewables (such as wind).

Q20: Given the analysis on the benefits, costs and potential, in what way and to what extent should we direct support to microgeneration electricity?

> It is not obvious why support should be directed to (or from) microgeneration relative to any other energy option. If the government wishes to promote microgeneration specifically for social reasons, the costs of doing so should not be borne by industrial consumers.

Q22: Do you agree with the Government's current position that it should not introduce statutory targets for microgeneration at this stage in its development?

> We agree – the government should not introduce statutory targets for microgerenation (or any other energy source, for that matter).

Q27: How can we best ensure that our use of biomass is sustainable?

> Policies aimed at increasing the use of biomass (and biofuels) on should take into account whole life CO_2 emissions associated with their production, distribution and use relative to the conventional fuels whose use they displace. Consideration should also be given to the economic impact of increased biomass use on sectors such as food, paper and pulp, etc., that are reliant on potentially scarce agricultural resources.

Q35: How can we adapt the Renewables Obligation to ensure that it effectively supports emerging as well as existing renewable technologies? Are there more effective ways of achieving this?

> Government should consider whether is appropriate for one mechanism to support emerging as well as existing technologies. There is little evidence that the RO has done anything to encourage research and development, or fund significant demonstration projects, for new renewable technologies. Banding of the RO would appear to be of limited usefulness as far as this issue is concerned. Consideration should be given to direct funding of R&D and commercial scale demonstration projects, separately from pseudo-market mechanisms such as the RO. We note that spending on energy R&D is low compared with the levels enjoyed by many of the UK's industrial competitors.

Q39: Do you agree with our analysis of the likely impacts of the proposed increase in renewable deployment on:

c. security of supply;

> Whilst a diversification away from imported fossil fuel dependence is desirable as far as security of supply is concerned, it does not follow that all renewables add to our energy security. We are especially concerned that the UK target would require at least a third, possibly over 40% of UK electricity consumption to be met from renewables, with wind being the single largest contributor. Wind may displace fossil fuel use on a seasonal basis, but is incapable on its own of providing instantaneous security of supply. This would be a major concern if wind penetration ever reached the levels indicated in BERR's projections.
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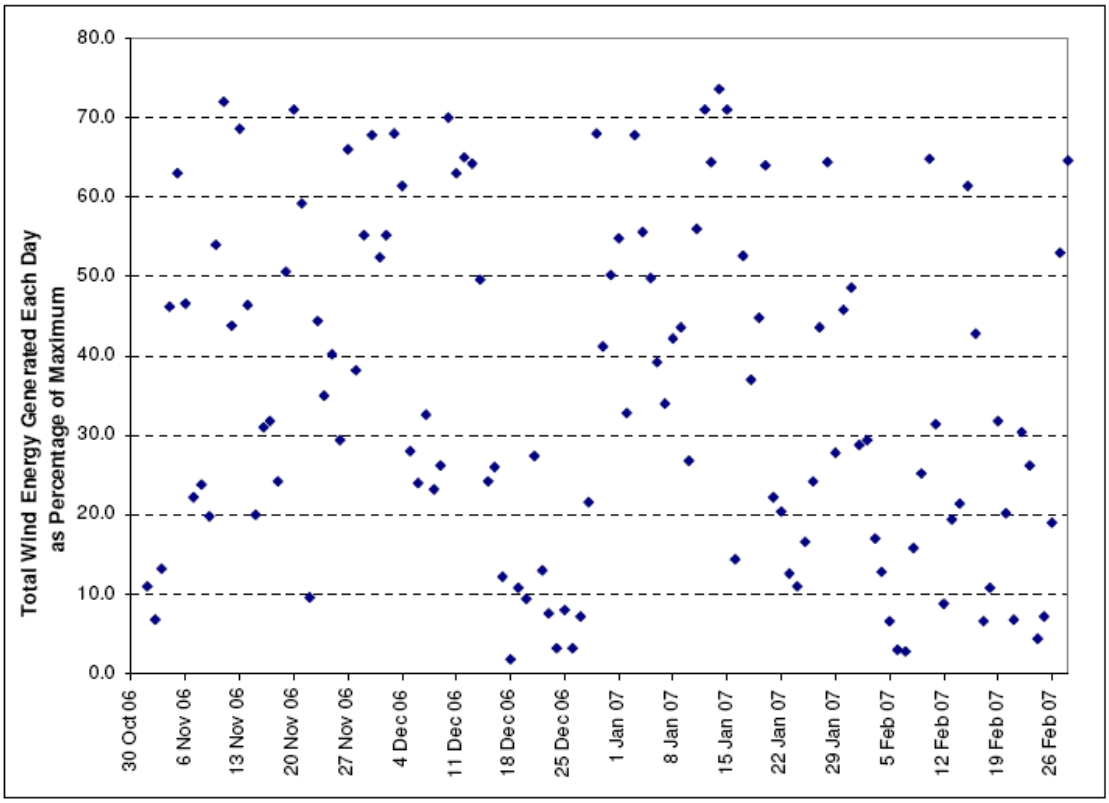
> BERR and others should be aware that the contribution of wind to security of supply is routinely misrepresented by the British Wind Energy Association, which recently claimed "There is always wind somewhere in the UK, and a lack of wind in one area is cancelled out by wind in others" – a statement that is directly at variance wit h the evidence, as the chart below confirms:

Figure 27 – Wind Output, daily output as % of maximum



This chart shows total output relative to rated capacity on a daily basis over winter 2006-07 for all the wind turbines across the UK where output was notified to National Grid, and was originally published in one of their Winter Outlook reports. It shows output fell below 10% around 20 days, with a minimum of only 2%, during this period of high demand. Doubtless even lower minimum output levels were experienced on a half hourly or instantaneous basis.

It is clear from meteorological studies that the reliable instantaneous convertible output of the UK's wind resource, even offshore, is effectively close to zero. Consequently, it will be necessary to maintain permanent (largely fossil fuelled) backup broadly equal to the total installed capacity if wind penetration is allowed to rise to significant levels, with all that entails in terms of cost, CO_2 emissions and continued dependence on imported fuel supplies.

The practical limitations associated with high reliance on wind power suggest BERR should focus its attention on more secure renewable options, particularly marine technologies which might be deployed within UK waters. We welcome the fact that BERR is already conducting a feasibility study into tidal power on the river Severn and await its outcome with interest.

d. energy prices;

BERR deserves credit for its frank admission that UK climate policies have already inflated industrial electricity bills by 21% (consistent with our own estimates) and that their impact will rise to 55% by 2020, with a possible 10-16% in addition a result of attempting to meet the EU renewable target. Energy intensive industries where 20-25% (e.g. steel, paper, glass, cement), 40% (aluminium) or even 70% (industrial gases) of total production costs are energy related, that have to compete in a global markets, cannot remain profitably located in the UK if cost increases of this magnitude are incurred unilaterally and sustained over the long term.

It is worth noting that many intensive industries already obtain much of their energy from low carbon sources (principally nuclear, but also some large scale hydro and co-fired biomass). Others run largely gas-fired industrial CHP, which could be adversely affected by the additional 24-49% increase in industrial gas bills indicated in BERR's analysis. These industries will require assurance that they will be protected against the impact of further cost-raising measures if they are to continue investing in the UK. It would be entirely counterproductive as far as global CO_2 emissions are concerned if such industries cannot remain located within a low carbon economy, since it would encourage carbon leakage and act as a positive deterrent for emerging economies to follow our example.

We understand that energy intensive industries in other parts of Europe will also face cost increases as a result of the EU renewable targets, though not to the same extent as in the UK. This is partly because other countries' share of the burden is not as disproportionate as the UK's, but also because they are committed to renewable support mechanisms where the impact on supply prices is wholly or partly reduced for vulnerable industries. IFIEC Europe (the International Federation of Industrial Energy Consumers, of which EIUG is the UK member) has collected information on the costs of national renewable subsidy schemes, their impact on industrial supply costs and the treatment of supplies to intensive industries, which BERR might find useful to review.

g. the economy;

We agree that attempting to meet the EU target would be economically devastating and have no reason to question BERR's analysis that this could destroy 0.5%-1.0% of the UK economy by 2020.

Q40: What more could the Government or other parties do to ensure the UK meets the EU renewable energy target?

The details of the EU target, and the UK level of commitment within it, are yet to be finalised. The Government should therefore do whatever is necessary in the time remaining to ensure that the overall target excludes energy consumption in sectors where material progress in renewable use by 2020 is unrealistic (such as aviation) and to protect the UK from facing a disproportionate share of the overall burden.

Given the importance of trade in attempting to meet the UK target, it would be unacceptable to hold the UK responsible for failing to meet its obligations if its efforts have been frustrated by other Members States failing to liberalise their energy markets and preserving national renewable support mechanisms that are themselves a barrier to trade.

Q41: Do you agree with our overall approach to developing a UK Renewable Energy Strategy?

We profoundly disagree with the overall approach, for the reasons outlined in the general comments above. If it is not possible for to re-negotiate a less undeliverable target – or preferably abandon a binding target altogether – the UK must take steps to minimise the economic damage that will inevitably result.