



Possible Models for a Capacity Mechanism – DECC Consultation

Response from the Chemical Industries Association

The Chemical Industries Association welcomes the chance to respond to this key consultation. Electricity costs are a significant part of our energy intensive members operating costs. It is therefore essential that Government continues to promote measures to ensure a fully secure, liberalised and competitively priced electricity market - for further background see the Appendix.

General comments on wider Electricity Market Reform proposals

Before addressing the specific subject of models for a capacity mechanism, we would first like to make some more general comments in response to some of the policy decisions as set out in the White Paper published alongside the consultation.

Enablers of climate change solutions need the right manufacturing environment – As highlighted in the CIA response to the DECC consultation on Electricity Market Reform earlier this year, chemical sector products are used in a wide range of climate change solutions across many sectors of the economy¹. The chemical sector – along with other energy intensive sectors – is essential and integral to the successful transition to a low carbon economy in the UK. We support the Government's commitment in producing an Energy Intensive Manufacturing Strategy and will continue our input via the Green Economy Council sub-group for energy intensive industries, to ensure a strategy is delivered in a timely manner.

Unilateral increases in energy costs must be mitigated – The impact of the policy changes must be accurately understood for all sectors of the economy. The government has recognised the need to publish an assessment of the impact of cumulative energy and climate change costs on intensive industry and we welcome this. The potential for increases in electricity prices for energy intensive industries of up to 52% by 2020 is significant and highlights the need for full mitigation of these unilateral policy costs for those most exposed to international competition. Germany shows the example of a government recognising the risks of unilateral taxation measures being applied to energy intensive industries in the way its most intensive industries are exempt from policies that would make them uncompetitive.

¹ Further details are set in the appendix outlining details of the Chemical sector.

There are still significant policy uncertainties - Although the white paper helped give some clarity on the direction government wish to take with its high level policies, there remains much significant detail missing, making it hard to assess the full impact of the policy landscape. We look for more certainty emerging following the Government's more detailed views in the technical report due at the end of the year. We hope that adequate opportunity is allowed for parties to comment once this detail is available.

Feed in Tariffs with Contract for Difference (FiT CfD) and Carbon Price Floor – The initial CIA response to the DECC EMR consultation suggested that FiT/CfD would be an appropriate and adequate mechanism to incentivise the necessary market investment. The proposal to introduce the Carbon Price Floor alongside the FiT CfD appears to be principally driven by fiscal revenue considerations and will represent an additional financial burden and threat to the competitiveness of exposed energy intensive industries. We hope the red tape challenge's focus on energy (scheduled for November) will investigate the increasingly complex and, in some cases, conflicting nature of policies in the electricity market. With regard to FiT with CfD, there is still a significant lack of detailed definition as to the way tariffs will be determined, market prices will be identified and counterparty risks will be handled. We look forward to seeing further clarifications on these and related matters. For the time being, we would stress that future tariffs should be predictable and subject to adequate grandfathering, in order to give investors confidence in the market place.

Emissions Performance Standard (EPS) - CIA doubts there is a need for an EPS, given the regulation that is already in place. With the overriding caveat, we recognise the pragmatic way in which the scheme is proposed to be implemented. The decision to allow generators the flexibility to increase emissions at times of high demand without penalty, as well as ensuring that the future EPS does not retrospectively affect generation plant already commissioned, appears realistic and sensible. Again we stress the need to ensure the predictability and stability of the EPS with infrequent reviews.

Specific comments on capacity mechanisms

DECC have presented several wide ranging capacity models, from a targeted model with strategic reserve to a market based model with either a capacity or reliability payment. Given the early thinking and lack of specific detail surrounding these proposals and the vast number of uncertainties of how each mechanism will interact with the market, we find it currently impossible to offer any detailed critique or comments in relation to the questions being posed. Instead, we list the main principles we believe the Government should observe in securing the electricity market in the future.

We still question the need for radical reforms at this time –We welcome the commitment to ensure that future security of supply remains consistent with the current high level provided by the electricity market. However, we query the need for such radical reforms at this stage. We are already seeing significant investments into new gas CCGT's as the market looks to cover an anticipated tightening in capacity. At a recent event sponsored by one of the “big six” generators, it was openly stated that current investments in new gas-fired plant are being made to benefit from the predicted future narrowing of electricity margins. This poses the obvious question as to whether the incentive is already there to fill the gap? Our members seriously doubt whether a capacity mechanism would increase security over and above more targeted changes to the obligations currently on the market.

What role is the capacity mechanism there to fulfil?

It would seem to us that there are at least two quite distinct issues of capacity reserve to be addressed:

1. Tight capacity margins occurring during the winter months due to peak demand and the potential unavailability of intermittent generation. These instances might typically be associated with very cold anticyclonic weather conditions lasting a number of days.
2. The capacity to deal with shorter-term variability in renewables, and particularly wind generation as more and more intermittent generation at low or no marginal cost penetrates the electricity market. This will typically vary on an hourly basis.

We observe that these needs are very different in scope, duration and extent. At present, it would seem that the Government has not developed a meaningful strategy that covers these distinct capacity requirements and we believe the proposals for a capacity model, as they currently stand, are not fit for the totality of need. ***We would ask Government to take the time to examine this area in more detail*** and to produce a detailed strategy to ensure the future security of the system.

Demand side response – While it is not possible for all of our members to actively participate in demand side response, be it due to processes on-site, HSE or the large intensive nature of some sites. There are members within the CIA who already offer some services as part of STOR² or other demand side response services. We would support any developments that allow companies to benefit from actively managing their load for the benefit of the wider market if the ability is there. Whilst energy management is not the sole business of our members, any future developments should ensure that manufacturing plants are more realistically compensated financially whilst helping to cover the increasing fluctuations as intermittent generation is increased on the UK system. Although the CIA does not know the absolute number of participants in STOR, we have no doubt that participation would be greatly increased if we were to see the same financial reward (or even a fraction) as recently given to wind generators to stop

² STOR - Short Term Operating Reserve

generating electricity³. Any further measures introduced should be assessed to ensure that there are no negative interactions between schemes. We look forward to engaging further with the Government in this area. Finally whilst we have already noted that the capacity models are not yet fit for purpose, it is clear that a market based model would allow greater demand side response from market participants. We feel the lack of attention given to this area of the proposals is a very notable and a regrettable omission from the White Paper.

A capacity mechanism should complement the electricity market – We have reservations as to the interactions of a capacity mechanism with other market mechanisms, especially the proposed FiT with CfD. Not only is there the potential for a double benefit or penalty but it's essential to ensure that any interactions do not cause any unforeseen behaviour changes in the way generators supply electricity at times of high demand. We ask DECC to make a full impact assessment into the interactions of a capacity market once there is more clarity on the design of the chosen capacity model.

Any capacity mechanism brought in must ensure greater physical security – At this early stage of discussing possible capacity models it would appear that some models may oblige suppliers to ensure they have adequate generating reserve whereas other methods may result in the spread of financial risk. The goal of any capacity mechanism should be to ensure that there is an adequate generation / demand margin via generating plant on the ground.

We question whether a “central agency” will be able to successfully administer any proposed scheme - It is clear that there are significant risks in the decisions that the ‘central agency’ will make in setting up some of the proposed models. We suggest Government is not best placed to adequately predict the amount of future reserve capacity required, the correct strike prices level, contract duration etc. This will lead to significant errors, increased costs and with no tangible results. *We await further details of how the key variables will be assessed to help ensure the right outcome, however it is apparent that market based capacity models will reduce the likelihood of incorrect predictions within Government.*

Ofgem’s market assessment must be transparent - Under the current proposals GEMA⁴ will be making an annual report on security of the UK electricity system. We ask that this report is made available to the whole market in a transparent way, such as National Grid’s annual seven-year statement which already publishes the forecast generation availability and margin for the next seven years.

Details within the technical report should be up for consultation - The publication of a technical report at the end of the year will hopefully clarify the Government’s thinking in a

³ Wind generators recently compensated at a rate of £999 /MWh to not produce electricity. See article reference in the Telegraph - <http://www.telegraph.co.uk/earth/energy/windpower/8770937/Wind-farm-paid-1.2-million-to-produce-no-electricity.html>

⁴ GEMA - Gas and Electricity Markets Authority (governs Ofgem)

number of areas. Given the current vast number of uncertainties surrounding Government's proposals, we would consider it appropriate to invite further more detailed comment at that stage.

Calculation of VoLL – Under Ofgem's current Gas Significant Code Review there has already been plenty of discussion on the Value of Lost Load, with the domestic sector and industry sector on different scales. However, even within industry, it is clear that a one-size-fits-all approach (or even a number of bands) would still be inadequate, for example: the chemical sector is highly diverse and there can be considerable variations from site to site. We would ask DECC to discuss the issues of calculating VoLL with Ofgem so the same discussions are not repeated.

As a final comment - in one way or another, end consumers are going to pay for reserve capacity.
We ask Government to ensure that any mechanism introduced is cost-effective and promotes the delivery of investment capital in the right way.

Appendix

About the chemical industry

With an annual turnover of £50 billion, chemical businesses in the UK are a key contributor to the economy. Every working day, our sector adds £30 million to our country's balance of trade. The jobs of 600,000 workers in the UK depend on chemical businesses. Workers in chemical businesses earn on average 40% more than other parts of manufacturing.

The UK chemical industry is exposed to the risk of carbon leakage. We are highly energy intensive, accounting for 22% of total UK industrial consumption. We are also highly exposed to international competition in terms of both trade in our products and attracting investment. This is because our businesses compete in global markets and pricing of basic chemicals is very similar across Asia, North America and Europe. In addition, about 70% of sites are headquartered outside the UK ($\frac{2}{3}$ of these outside the EU).

The UK chemical industry already has an excellent track record for reducing our own emissions, having improved our energy efficiency by 35%, and will continue to make improvements. But we are also enablers of climate change solutions in a wide range of applications across sectors of the economy including: households, transport, energy and agriculture. Examples of solutions include: building insulation, PVC and soda ash for double glazing, fertilisers and crop protection (to reduce land use), lightweight components for cars and planes, low temperature detergents, biofuels and materials for wind turbines. An independent study has confirmed that the global chemical sector currently delivers 2 tonnes of greenhouse gas savings for every tonne we emit in our production processes and that, with the right policy framework; this could rise to more than 4 tonnes by 2030. These results are summarised in [CIA's low carbon brochure](#) which also includes case studies to demonstrate that many of these solutions are already produced in the UK.