



British Ceramic Confederation

Federation House, Station Road, Stoke-on-Trent. ST4 2SA Tel: (01782) 744631 Fax: (01782) 744102
E-mail: bcc@ceramfed.co.uk

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to: Kersti Berge, Head of GB Markets and Ian Marlee, Partner, Trading Arrangements
Ofgem
9 Millbank
London SW1P 3GE
email to: project.discovery@ofgem.gov.uk
from: Laura Cohen

RESPONSE TO OFGEM – PROJECT DISCOVERY CONSULTATION

Dear Kersti and Ian,

The British Ceramic Confederation (BCC) is the trade association for the UK Ceramic Manufacturing Industry, representing the common and collective interests of all sectors of the Industry. Its 100 member companies cover the full spectrum of materials, plant and machinery, and comprise over 90% of the Industry's manufacturing capacity.

Membership of the Confederation includes manufacturers from the following industry sectors:-

- Gift and Tableware
- Bricks
- Refractories
- Plant and Machinery
- Floor and Wall Tiles
- Clay Roof Tiles
- Industrial Ceramics
- Sanitaryware
- Clay Pipes
- Material Suppliers

The industry is energy-intensive: energy bills / taxes can be up to 30-35% of total production costs. BCC is a member of the Energy Intensive Users Group.

Many thanks for the opportunity to respond to your consultation. The document is clearly presented and addresses some real threats to the UK economy. Now is a critical time, when many energy intensive industries are considering whether or not to invest in the UK. Our members are finding that the very wide range of energy issues in the UK compared to those in other countries, not least, energy security, is affecting these investment decisions. The range of energy issues affecting our industry in the UK, with current priorities in bold include:

- **Recognising that UK has committed to 2050 reduction targets above those in other countries, how to ensure this is achieved through a low cost route. For example, there are uncertainties in costs which make business planning difficult resulting from: CCA, Low Carbon [Transition Plan](#) and [Industrial Strategy](#), the [Renewable Energy Strategy](#) and the proposed extra fossil fuel levy to fund "Renewable Heat Incentives", CRC etc.**
- **EU ETS Phase III (and possible EU carbon tax)**
- **Security of supply – e.g. as raised in Ofgem Project Discovery report – with voluntary or possible compulsory industrial outages.**
- **Lack of prompt response to immediate energy credit issues and gas capacity charge reduction (gas code modifications 244 and 264)**
- Follow-up to the Select Committee report last July – e.g. competitive contracts and need for major infrastructure investment in gas storage to smooth the price of gas.

- Step changes in manufacturing technology to meet the UK's 2050 carbon targets will be needed over and above that in other countries.
- Incentives for exploiting opportunities around renewables and heat
- Steep price increases from the electricity distribution price review

I hope that the issues you raise in Project Discovery are promptly addressed and that the information presented below is taken into consideration.

The British Ceramic Confederation is supporting the Energy Intensive Users Group's response to the consultation, too, which is being sent separately to you.

Against this background, for the specific questions you raise, and for additional comments raised in the report separate responses relevant to the UK ceramic industry are:

CHAPTER: One

Although there are no specific questions in this chapter there are 2 concerns:

Firstly

In 1.12 you assume that market participants respond adequately to market signals. Industrial customers are very concerned about a wider range of energy issues in the UK (see above) and these other issues may also affect their responses. For example, because of the UK's Climate Change Agreement, and also EU ETS, over the last decade our members have invested, very sensibly, in more energy efficient processes. In our industry investment has gone into continuous, more energy-efficient "tunnel" kilns rather than "intermittent" batch kilns. However, batch kilns can give a better demand-side response.

In other words, any UK energy policy must be joined-up to avoid industry receiving conflicting signals.

Secondly

In 1.17 a risk stated is that a more flexible demand side response may be required in future to better manage any shocks in gas or electricity supplies. In the ceramic industry there is very little capability of gas or electricity demand side response, particularly for factories using continuous kilns. The loss of energy supply (gas or electricity) – and electricity will be used for controlling the kiln regardless of heating fuel – risks damaging the kiln irreparably as well as losing high value products. Scheduled shutdowns in continuous processes, even with weeks to prepare, can be extremely expensive as well as potentially hazardous if performed in haste. A small percentage of our members, often with batch processes, may be able to have a demand side response if there is adequate warning – up to several days may be necessary to allow for cycle completion and cooling.

Of the total energy consumed by the ceramic industry, only 15% is electricity – and much of this is used for controlling gas fired kilns and raw material preparation. So probably:

- 5-10% of that 15% is likely to be available for demand side flexibility in the firing processes.
- 10- 20% of the 15% might be available for demand side flexibility in raw material production.
- Overall 15-30% of 15% - **so under 5% of total electricity might be available for demand side flexibility**

CHAPTER: Two

Question 1: Please provide comments on our approach of using scenarios and stress tests to explore future uncertainty, and as a basis for evaluating policy alternatives.

- This is a widely used methodology – however, strategy **must** be robust against all outcomes and the large number of high and moderate impact high impact situations (p8) - and the effect on industry indicates that it is not.

Question 2: Are there other techniques for analysing uncertainty that we should consider?

- Monte Carlo simulation or similar might allow more quantitative assessment of likelihood of some scenarios/ interruptions. However, many scenarios will also be linked, and this must also be modelled more rigorously e.g. no wind output, re-direction of LNG supplies, electricity, inter-connectors fully exporting and cold winter. (“irrational” market behaviour is not taken account of - for example, been extended periods in past winters when Continental gas did not flow to the UK despite UK prices being markedly higher – storage levels in some continental countries –e.g. France and Germany are much higher than the UK)

Question 3: Do you agree with how we measure the impacts of our scenarios and stress tests?

- When evaluating the results of scenario planning analysis, it is helpful to list tactics / management responses to each outcome to indicate how each scenario adverse event will be handled. This would demonstrate more fully that the strategy is robust. Therefore there needs to be more detail here.
- The impact on industrial energy costs has been omitted. This is a major oversight. Costs must be made visible now to aid the decision making process for manufacturing investments in the UK as outlined above. Echoing EIUG’s concerns, it is also counterintuitive that scenarios requiring double the investment level (an extra £100bn) have no major impact on bills for customers.
- It is important that what is excluded from scope is stated: in a meeting with a DECC Minister recently he (mistakenly) thought that Discovery costs were ALL the extra costs that industrial consumers would pay in future. In practice, these are extra costs over and above those from other UK and European energy policy measures. Without this clarity and listing of the impact of all measures in total, industrial investment in the UK is being deterred.

Question 4: Do you agree with our key scenario drivers and choice of scenarios?

- In the green stimulus scenario, it is assumed that governments implement green stimulus measures. In practice, particularly in the UK, with the current state of public finances, there could be very little public money available here for investment.

Question 5: Do you believe our scenarios sufficiently cover the range of uncertainty facing the market, and hence cover the areas where future policy responses may be required?

- What is missing is that some companies may have little cash available for investment now during the recession. This has been exacerbated in our sector in recent months by demands on cash for energy supplier deposits or paying for gas capacity charges where production has been reduced – and lack of a prompt response by regulators. A policy response to compensate for that would be welcome. For many of our members, long-term contracts are just not available at present. (see also response to chapter 3, question 3)
- The credibility of the **2020 renewable target** and the costs pursuing it will impose on consumers is not fully assessed: it is an exceptionally expensive way of reducing carbon emissions. It would be regrettable if the UK, in promoting economically inefficient climate policies, demonstrates to the rest of the world that it is not possible to retain energy-intensive industries within a low carbon economy.

Question 6: Do you have any specific comments on scenario assumptions, and their internal consistency?

- In addition to the points previously raised...
- 2.43 and Figure 2.1 assume too simplistic an approach – in other words a consistent global approach. This results, in our belief, in unrealistically low global oil, gas, coal and carbon prices. For example, many developing countries are already pursuing something “less green”

than the "dash for energy" scenario and are starting to emerge from the recession. This will, regardless of the UK's approach, push up oil, gas and coal prices. The model ignores the highly variable daily price of gas – which is a function of the lack of storage.

- In 2.51 and figure 2.2 the demand for electricity in cars needs to be considered. And also that most of domestic heating will remain as gas – consumers are unlikely to replace whole heating systems.

Question 7: Do you agree with our methodology for modelling gas and electricity supply/demand balances?

- In broad terms, yes, but there is lack of understanding of finding alternatives at times of stress. Often the same stress factors will affect markets beyond the UK and complicate our position.
- Potential demand side response (which will be required in greater volume as UK energy supplies become more reliant on intermittent wind, and hence less secure) must be assessed on an industry/process-specific basis and that any suggestion by DECC/Ofgem that industrial supplies will be left at risk a wind-dependent future in order to preserve supplies for domestic users, will be seen as a clear deterrent to industrial investment in the UK.
- There is similar lack of understanding of "curtailment of demand (voluntary and involuntary)", which must be assessed on a sector-by sector basis. (see response to section 1.17 above)
- Moreover, we are concerned that in section 2.10, "an adequate level of security of supply" has not been defined. As shown above, and as detailed in the EIUG response, voluntary reductions in industrial demand cannot occur in all industrial sectors and certainly not at the level demanded by the Ofgem model results. This is a major omission from the work and could deter industrial investment in the UK. Supply security is essential.
- We are also concerned that there is the broad brush assumption made in section 2.2 that there can be "adequate compensation" for loss of supply. This needs to be more sensibly thought through. Some of our members may not be able to be "adequately compensated" for loss of supply if irreparable or long term damage is done to a kiln (long term damage could take out a kiln for several months and cost millions of pounds). Loss of product / failure to meet orders and demands on cash could close a business and lose jobs permanently.
- Policy options need to include "affordability" for industrial customers as well as domestic customers (section 2.3).

Question 8: Do you agree that LNG is the likely medium-long term source of "swing gas" for the European market.

- Yes

CHAPTER: Three

Question 1: Do you have any observations or comments on the scenario results?

- This underestimates the need for gas storage – particularly for industrial users. There needs to be a definition of adequate level of security – for example – 30 days or more – and costed plans with timing to build this capacity together with compulsion to use it – as in other countries, such as France and Germany.
- It is not obvious in Figure 3.18 / section 3.61 why the gas price would fall after 2016 in the “dash for energy” and slow growth scenarios.

Question 2: Do you agree with our assessment of what the key messages of the scenario analysis are?

- No. As previously discussed, voluntary measures on the demand side may not be possible (3.29). Such measures need to be considered on a sector-by sector basis. Also domestic gas use will continue for the foreseeable future

Question 3: Are there other issues relating to secure and sustainable energy supplies that our scenarios are not showing?

- Our main concern is that the impact on industrial consumers, and the likely damage to the manufacturing economy overall, is inadequately considered.
- 3.71 highlights the greater importance of long term energy, particularly gas contracts by consumers to mitigate this risk. At present many of our members cannot get access to long term contracts because of the behaviour by many suppliers and their insurers by our sector as a whole (see response to question 5, chapter 2). This is therefore proving yet another deterrent for investment in the UK in our sector: if it is essential that long term contracts, particularly gas contracts, are available for industrial consumers in the UK to ensure supply security, there needs to be immediate regulator intervention to make this happen. This builds on the themes addressed in the Select Committee Report in July 2008.

Question 4: To what extent do you believe that innovations on the demand side could increase the scope for voluntary demand side response in the future?

- We see a very low likelihood of innovations around continuous process plant. Provision for alternative sources of heat can be built in to plants at design / construction stage, but at a cost.
- Cost-effective energy efficiency investment has occurred in our industry (e.g. waste heat recovery). Without major technology investment and innovation there may be limited options for large further energy reductions.
- As explained previously, most of the energy demand in ceramics production is from gas which is more thermally efficient than electricity for the processes. There is also little possibility of switching to electricity in the outlined timescales – and this would be an expensive change to make. Companies have moved from coal / oil / dual fuel fired with gas, to solely gas, and companies have little flexibility to fuel switch now.
- Some companies operating batch processes – a minority of all production - might be prepared to (and have demonstrated that they can) shift their days around – this needs to be balanced against extra costs of running a night shift.
- There may be some way in which energy companies could pay for over production / stockpiling of production during summer months when the UK’s energy demand is low. There are several reasons why this would in practice be difficult to achieve:
 - a) The working capital requirements for extra stock would be very high.
 - b) Capital costs for plant would be higher than now (plant capacity would need to cover a larger peak production). This capacity increase and capital requirement would be particularly exaggerated for the construction sectors, as traditionally demand and production are high in the summer and stocks have been built up in the winter.
 - c) Flexibility from production would be removed. For example, many UK ceramics manufacturers have survived the recession and are competing well against overseas production because they have invested in “just in time” production / lean supply chains/ minimal stocks. This gives them an edge over Asian production as shipping times from

the Far East can be 6-8 weeks. A future need to stop production in winter would reduce the UK's competitiveness for many products.

d) Current price signals with the gas price significantly higher in the winter than in the summer in the UK had already resulted in many factories extending their Christmas break to ensure cost savings – there may be little further opportunity to extend this for the reasons outlined above

- In the report, there is little mention of electricity storage and capacity, cost and timing – and how this might help. (Note 40 on page 52). The effect of electric vehicles needs to be considered – as well as demand side responses on the domestic consumer side – e.g. subsidies to move to off-peak electric heating / encouragement of off-peak electricity use (e.g. running electrical appliances at night)
- Storage capacity can be expanded by very much more than is assumed for the basic scenarios. The amount of “demand side response” projected from I&C customers in Figs 4.2 and 4.4, 4.7, 4.9 implies massive industrial disruption and long term damage to the economy. The amount of demand side response on interruptible I and C is unlikely and is unjustified without a detailed sectoral analysis from Ofgem. Note that interruptible gas contracts will end in 2012. A minority of our members have used these to good effect previously. There could be benefits in Ofgem extending their use if Ofgem needs to promote a demand side response.

CHAPTER: Four

Question 1: Do you agree that our stress tests are representative of the types of risks facing the GB energy sector over the next decade?

- Broadly, yes

Question 2: Are there further stress tests that you think should be considered?

- Combinations of events must be considered more adequately – especially as they are linked. See response to Chapter 2 question 2 above and EIUG's response

Question 3: Do you agree with the assumptions behind our stress tests?

- As for question 2

Question 4: Do you have any views on the probabilities of these stress tests occurring?

- See EIUG response

Question 5: Do you agree with how we have modelled demand curtailment in response to constrained supply?

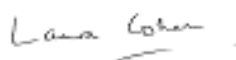
- As in the EIUG response, there do not seem to be many options. Those chosen appear disastrous for industrial customers, who are being asked to bear the costs of the past failure of the liberalised market based system to provide adequate energy supply infrastructure or long term supply contracts, and a future architecture inspired by a political imperative to incorporate excessive amounts of inherently unreliable wind capacity. Sensible long-term diversification of primary energy sources is also thwarted by the projected IED and political unwillingness, reflected in the models, to countenance new coal capacity.

Question 6: Do you have any other comments on our stress tests?

- No

Please feel free to contact me if you require any more information.

Yours sincerely,



Dr Laura Cohen, Chief Executive