British Sugar plc

Response to *Initial Thoughts on the reform of interruption arrangements on gas distribution networks – Ofgem May 2006*

INTRODUCTION

British Sugar is a large primary food producer, and over the last decade the largest part of its capital investment program has been in modern gas turbine powered CHP plants which have dual fuel dry low NOx capability. Two of our plants are now equipped with these gas turbines.

British Sugar currently operates four primary sugar beet processing plants which consume gas. These four plants are GDN interruptible sites and have full fuel switching capability with gas oil and fuel oil as alternative fuels.

We note that you invite further bilateral discussions on this issue. We would be pleased to meet with you to explore this important issue further.

Ian Calvert
British Sugar Corporate Affairs
June 2006

Answers to Consultation Questions

CHAPTER: Two
Question 1: Has Ofgem identified the key weaknesses of the current interruption arrangements for GDNs?

Whilst we do not doubt that the current arrangements can be judged as imperfect, the key question should be whether or not they are fit for purpose.

It is difficult for us to assess the value of changing the arrangements as little quantitative analysis has been presented showing what can ultimately be gained in terms of increased efficiency in network investment decisions.

Ofgem states that currently, too much interruption is made available, increasing costs for (firm) customers. The implication is that some of these costs can be saved and smeared back across the firm customers in the short term. From British Sugar's perspective this is unsatisfactory, as companies such as ourselves have made capital investments in good faith to provide this capability. British Sugar invested millions of pounds in having dual fuel interruptible capability (the first in the world using General Electric LM 6000 dry low NOx gas turbines) in two plants in 1998 and 1999. The investment decision to use this technology was based on the incentive offered by the transportation discount for interruptible gas, which reduces our costs by approximately £1million per year. Changing our sites to firm gas in 2010 would leave us with stranded assets for which we should be compensated.

We also note that the proposed reforms act on the capacity element of gas transportation charging which is itself part of an arbitrary 50:50 capacity/commodity split. Ofgem appears keen to progress towards this whole system becoming more cost-reflective and hopes that the changes to the current interruption arrangements are a step in this direction. However, if the next steps (changing the capacity:commodity split) prove difficult to progress, or if the Ofgem "end-game" of capacity charging results in an overall situation which delivers few real changes to the current investment drivers then it is difficult to justify the current proposed changes.

Changes to the arrangements for poorly quantified or theoretical benefits should not be progressed.

Question 2: To what extent do interested parties consider the current arrangements have significant strengths, and if so, what are these strengths?

As noted in our answer to question 1, British Sugar has significant sunk costs under the present arrangements, with timescales well within any definition of the affected assets' life. Changes to the regime should therefore not be undertaken lightly and not without suitable transitional arrangements for installations such as ourselves

The current system is simple and low cost. It is also effective in that it has delivered significant investment in alternative fuels capability which brings with it a valuable contribution to security of supply. Changing the system may result in multifuel systems being de-commissioned and fewer being built which will have a negative impact on security of supply.

Question 3: Do you agree with Ofgem's key principles for reform?

We recognize that Ofgem's key principles are well intentioned. Our concerns, however are that the results could be transitional problems, uncertainty, a lack of transparency and extra complication and expense from the creation of a market where creating such a market is not appropriate.

Some of the issues could be addressed directly without major reform of the whole arrangements. For example, if the one year notice period is too short, then this could be increased. Also, if there is concern about "free riders", for example the hospital trusts mentioned in the Ofgem document, then sites could be made to demonstrate their interruptibility contractually. Truly interruptible sites should accept this as they will be routinely testing their alternative systems and switching procedures in any event.

CHAPTER: Three
Question 1: To what extent do respondents consider that the model so far developed by the GDNs meets Ofgem's principles for reform?

Again, British Sugar does not have a view on this. We consider it important that any changes are justified, and in that respect it is the results of any Impact Assesment which are important.

Question 2: Has Ofgem identified all the key interactions with the enduring offtake reforms for the NTS?

One of our large gas consuming sites has been deemed to be a network sensitive load (NSL). The treatment of these sites seems rather unclear in the proposals. Overall the changes create significant uncertainty; there is a risk that such sites could either be deemed firm with the GDN not requiring any interruptible capacity at all with the NTS loads providing sufficient interruption or alternatively that there is a local GDN constraint which leaves the load with significant "market power" in a new market for interruption rights which would then be unacceptable. The market depth and timescales involved in infrastructure investments do not lend themselves to a dynamic market with values being signaled by forward prices. If the resultant market is illiquid, it will deliver no benefits.

CHAPTER: Four
Question 1: What is the appropriate form of an incentive on GDNs for the purchasing of interruption?

It is difficult to envisage a system working whereby the GDN's bear the full cost of failing to deliver capacity to a site which has been deemed "firm". Large GDN connected loads such as ours will inevitably be shed rather than risk depressurising the local gas network. The consequences of such a "market failure" are asymmetric and so may not result in the true costs emerging in any auction or sale of interruption rights.

Question 2: Do respondents support the continuation of a similar incentive to the transitional incentive for GDNs purchasing of NTS offtake capacity?

We note that the current 15/45 day interruption regime is working.

APPENDIX: Two
Impact Assessment information request.

British Sugar plc. – Sugar Manufacturer

Four DM offtakes, three in East of England GDN and one in North of England GDN

Site 1 – East of England, Annual Offtake – 1,250,000,000 kWh, Interruptible.
Site 2 – East of England, Annual Offtake – 300,000,000 kWh, Interruptible.
Site 3 – East of England, Annual Offtake – 1,800,000,000 kWh, Interruptible.
Site 4 – North of England, Annual Offtake – 400,000,000 kWh, Interruptible.

Costs of Turning Down or Complete Interruption:

Gas is used in a number of different combustion processes within each of the sites; to raise steam for process heat, for electricity generation using gas turbines and for direct fired animal feed driers. It is impractical to stop raising steam for process heating, as it takes several days to shut down a sugar factory without causing severe problems. For this reason we have effective alternative fuel systems that allow fuel switching from gas. Whilst it is technically possible to stop generating electricity on the gas turbines it is not normally financially viable and so we have invested in dual fuel systems allowing seamless fuel switching from gas. Animal feed drying can also be switched from gas to alternative fuels and drying can also be suspended and arrangements put in place to sell a lower value moist product. Alternative fuel systems are in place on our driers but where the alternative fuel is distillate (gas oil) the cost of the alternative fuel makes it more economic to stop drying and make arrangements to sell pressed animal feed.

In summary, when called on to interrupt we would normally switch to alternative fuels but we have also stopped drying animal feed on occasion.

Considering the costs of switching to alternative fuels these can be expressed as the sum of three elements:

1. The cost of the alternative fuel relative to gas, this can be positive or negative depending on the prevailing gas price.
2. The cost of additional CO2 emissions, British Sugar was subject to the UKETS last winter but from 1st January 2007 will be included in the EUETS.
3. The costs of lost production, because of the effective alternative fuel systems installed British Sugar does not put a high value on this cost, we would normally expect to be able to switch fuels without impact on production.

We have not been required by the network operator to interrupt gas consumption during the last two winters. However for the last two winters we have had systems in place to switch fuels in response to prevailing wholesale prices and these have been used. We calculate the cost of the alternative fuels and additional CO2 and express this as an equivalent gas cost in pence per therm and add a margin of 5 to 10 pence per therm as the trigger to switch fuels. British Sugar's energy purchasing function monitors wholesale market prices in real time using data feeds from energy brokers and when appropriate instructs operational units to switch fuels.

Our experience last winter can be summarised as follows:

Site 1
Gas used for process steam and electricity generation, alternative fuel is distillate gas oil. Fuel was switched 100% from gas to distillate for approximately 10 days last winter between 22nd November and 7th December. Duration of fuel switching was limited by the availability of alternative fuel.

Site 2
Gas used for process steam production and animal feed drying, alternative fuel is residual heavy fuel oil. Fuel was switched 100% from gas to fuel oil for animal feed drying for approximately 20 days last winter between 14th November and 22nd December and again late February. Duration of fuel switching was limited by the availability of alternative fuel. Fuel was switched 30% from gas to fuel oil for steam production for approximately 20 days last winter between 14th November and 22nd December and again late February. Quantity of fuel switching was constrained by environmental limits. Duration of fuel switching was limited by the availability of alternative fuel.

Site 3
Gas used for process steam production, electricity production and animal feed drying, alternative fuel for steam and electricity production is distillate gas oil and alternative fuel for animal feed drying is residual heavy fuel oil. Fuel was switched 100% from gas to distillate gas oil for steam and electricity production for approximately 10 days last winter between 22nd November and 7th December. Fuel was switched 100% from gas to residual fuel oil for animal feed drying for approximately 20 days last winter between 14th November and 22nd December and again late February. Duration of fuel switching was limited by the availability of alternative fuel.

Site 4

Gas used for process steam production and animal feed drying, alternative fuel for steam production and animal feed drying is distillate gas oil. Fuel was switched 100% from gas to distillate gas oil for approximately 10 days last winter between 22nd November and 7th December. Duration of fuel switching was limited by the availability of alternative fuel. Animal feed drying was suspended for approximately 30 days.

In preparation for the winter ahead British Sugar has increased the stocks of both distillate gas oil and residual fuel oil held at all sites and contracted for additional deliveries during the winter. We have also made plans to sell pressed animal feed product in place of dried.

Gas price at which we would interrupt our processes depends on the type of alternative fuel and the other costs such as duty payable and CO2 allowance costs.

Based on current oil prices and allowing a margin of 10p/therm less than the wholesale gas price gives the following:

Residual oil for use on steam generation on site 2 under UKETS – 64p/therm
Residual oil for use on steam generation on site 2 under EUETS – 76p/therm
Residual oil for use on animal feed dryers on site 2 – 76p/therm
Residual oil for use on animal feed dryers on site 3 – 76p/therm
Gas oil for use on steam / electricity generation on site 1 under UKETS – 89p/therm
Gas oil for use on steam / electricity generation on site 3 under UKETS – 89p/therm
Gas oil for use on steam generation on site 4 under UKETS – 96p/therm
Gas oil for use on steam / electricity generation on site 1 under EUETS – 100p/therm
Gas oil for use on steam / electricity generation on site 3 under EUETS – 100p/therm
Gas oil for use on steam generation on site 4 under EUETS – 107p/therm
Gas oil for use on animal feed dryers on site 4 – 110p/therm

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