

**Representation - Draft Modification Report 0498 and 0502**  
**0498 - Amendment to Gas Quality NTS Entry Specification at BP Teesside System Entry Point**  
**0502 - Amendment to Gas Quality NTS Entry Specification at the px Teesside System Entry Point**

**Responses invited by: 24 July 2015**

<b>Representative:</b>	Julie Cox
<b>Organisation:</b>	Energy UK
<b>Date of Representation:</b>	22 July 2015
<b>Support or oppose implementation?</b>	0498 - Oppose 0502 – Oppose
<b>Relevant Objective:</b>	a) None d) None

**Reason for support/opposition: Please summarise (in one paragraph) the key reason(s)**

Energy UK considers the impact on the Relevant Objectives to be negligible.

The proposers have not sufficiently demonstrated that if these proposals are rejected the gas field (Jackdaw) containing elevated CO<sub>2</sub> will not be developed at all. The developers have not stated at any point throughout the workshops that without approval of these UNC proposals Jackdaw will not be developed. Under the existing framework, which is sufficient for the 34 producing fields that are connected to the Central Area Transmission System (CATs), the developer's options are to either process the gas by removal of CO<sub>2</sub> or blend with gas from other fields on an interruptible basis to meet the existing specification.

With respect to Relevant Objective a), if the Jackdaw field project, which has led to these proposals, does not go ahead there has been no evidence put forward that there will be any requirement for additional reinforcement at another location as a consequence of this decision. There is always a risk that alternative supplies of gas (such as shale) could trigger reinforcement costs; however National Grid is incentivised to ensure that any investment is economic and efficient. Furthermore, the location of potential alternative gas entry points is not known and at many existing entry points there is sufficient spare baseline capacity and/or substitution possibilities.

This leaves only the very tenuous argument over utilisation of existing infrastructure. It may be possible to determine this if the alternative gas were to flow at a known location, for example if alternative gas were to flow at St Fergus rather than Teesside then gas at Teesside may be 'more efficient' due to shorter gas flow distance and lower compressor usage. However if the alternative gas were to be landed at Bacton then this may be 'more efficient' than flowing gas into Teesside. However, as the location of alternative gas is not known and no analysis of this nature has been undertaken we consider the

impact on utilisation of existing infrastructure cannot be considered in the context of these proposals.

If UNC 0498 and 0502 are implemented there will be no positive impact on Relevant Objective a) because the development of Jackdaw is not completely dependent on this outcome. The developers are still seeking sufficient tax incentives in order to move to a development phase.

With respect to Relevant Objective d) the workgroup after extensive discussions had concluded that there was no impact on competition and this was reflected in the workgroup report. However this has been subsequently changed by the Modification Panel as a positive effect

*Some participants believe that securing additional indigenous supplies of gas could have a positive impact on competition amongst shippers as a result of the additional availability of gas supplies, and particularly at times of curtailment of flows during summer shutdowns.*

*Some Panel members believed that these proposals contribute to the overall security of supply position, furthering Relevant Objective d.*

Energy UK is not convinced that any potential impact on competition in gas supply is material; in National Grid's Future Energy Scenarios (FES) document it states that in all scenarios (Gone Green, Consumer Power, No Progression and Slow Progressions) there is sufficient gas supply to meet demand, both on an annual and peak basis. Any perceived benefit may only occur in summer months, when gas from the Jackdaw field might otherwise be curtailed; this position has not been proven throughout workgroup discussions. Rather there could be a detrimental impact on competition in the electricity market if some gas-fired generation plant close to Teesside entry point were to incur higher EU ETS costs as a result of receiving gas with higher CO<sub>2</sub> content which in turn will increase emissions. To conclude, it has not been demonstrated that these proposals would have a positive impact on Relevant Objective d.

The principle of 'polluter pays' will be side-lined if these modifications are approved since the costs of additional CO<sub>2</sub> entering the network will be passed onto end customers, particularly those needing to secure EU ETS permits for emissions. Approval would also relieve the field developer / gas processing facility operator of competitive pressure to seek the lowest cost / environmental impact means of removing CO<sub>2</sub> from the gas flows delivered to the NTS.

#### **Implementation:** *What lead-time do you wish to see prior to implementation and why?*

Energy UK understands that the proposers wish for a decision to be made by 31 March 2017 at the latest since a decision in relation to the Jackdaw field development may take place later that year (although this has not been confirmed by the developer).

However, if the proposals are approved by Ofgem before 31 March 2017, the proposers may wish to implement the changes immediately. This would mean that an existing gas field which is currently curtailed (44 times in 2013) will no longer be restricted to 2.9%mol and therefore will be able to flow gas with higher CO<sub>2</sub>. This has not been modelled in the proposers' assessments or been extensively discussed at workgroup.

The effective date requested is October 2020. We consider this is reasonable, and we would propose that Ofgem does not take a decision regarding these proposals until there is more clarity in how the European Commission (EC) plans to implement the proposed CEN gas quality standard which contains parameters for CO<sub>2</sub> and could be made legally binding. An EC decision is expected during 2016.

This would also give additional time for Ofgem to consider whether approving these proposals may set a precedent for similar modifications at other entry points. This is briefly recorded in the draft modification report but Energy UK Members would like to emphasize concerns that if these proposals were approved others may be raised which may seek approval on non-discrimination grounds. This may result in CO<sub>2</sub> levels in the NTS creeping higher and the potential for more fluctuations in gas quality with the impact on an increasing number of gas –fired plant.

**Impacts and Costs:** *What analysis, development and ongoing costs would you face?*

As a trade association Energy UK would not face additional costs

**Legal Text:** *Are you satisfied that the legal text will deliver the intent of the Solution?*

Yes, however it should be clarified that this is contingent on the Jackdaw field being developed since this text appears in the Network Entry Agreement rather than the UNC.

**Modification Panel Members have requested that the following questions are addressed:**

*Q1: Respondents are requested to quantify any additional costs they would incur as a result of a CO<sub>2</sub> excursion to 4.0 mol% at the Teesside terminal (flow maps are included to help respondents; see figures A2.1 to A2.4 in Appendix 2).*

All gas-fired generating plant are susceptible to changes in gas quality since the plant is tuned to a certain pre-defined specification for optimum operating performance and low emissions.

Where changes in the gas quality specification occur rapidly the plant may trip. Further details including estimated costs are included in the draft modification report.

From the information provided by National Grid, simple flow maps for a single year, it is not possible to estimate the number of times that re-tuning may be necessary nor how many trips there may be.

*Q2: Respondents are requested to quantify any wider benefits/dis-benefits for the UK economy that might be derived from these proposals.*

Energy UK is aware that there are UK tax incentives to develop high temperature – high pressure fields, this is a government incentive to increase recovery from the North Sea reserves. However, the developer has previously stated that these incentives are not

sufficient to move to development. Therefore the proposers have not demonstrated how a change to the CO<sub>2</sub> upper limit will bring wider benefits to the UK economy.

Furthermore, the proposers indicate that changing the CO<sub>2</sub> upper limit will promote greater energy security. If implemented and the Jackdaw development goes ahead there may be greater gas production; however, this does not necessarily result in greater overall security of supply. Ofgem considered this in its gas security of supply report<sup>1</sup>

*This is because historically UKCS has not just provided domestic gas but worked as a flexible reserve of gas, with swing fields able to increase production during tight gas supply periods. The current emergency “command and control” arrangements are designed on the basis that there will be gas fields which can ‘ramp-up’ production should the supply and demand balance tighten.*

*Traditional swing fields like Sean and Morecombe are in decline and it seems unlikely that any of the new finds will be able to ramp up production during times of scarcity in GB and fill the gap left if international sources were interrupted. On this basis, although supporting domestic production can result in a number of benefits such as protecting base load demand it would not necessarily deliver additional security of supply to the UK.*

We therefore consider that the proposers have not demonstrated how development of the Jackdaw field would provide additional security of supply.

In any scenario appropriate investment signals should encourage upstream producers to develop projects to enable access to the cheapest source of gas supply irrespective of origin, this is ultimately in customers’ best interests.

*Q3: Respondents are requested to quantify the security of electricity supply risk to CCGTs. It would be useful to know how many CCGTs could be affected, when they might be impacted and what flexibility there is elsewhere in the system to accommodate.*

Gas demand from electricity generation is expected to increase as gas-fired power generation replaces coal-fired plants, and gas is increasingly necessary to provide flexible back-up for further deployment of intermittent renewables. Along with this increase in gas demand for power generation, demand reduction may become less flexible as the power sector becomes less able to switch to alternative forms of generation, such as coal, at times of high gas demand.

The security of electricity supply risk will manifest itself if a gas quality excursion were to result in a trip at times of high electricity demand, at such times there would be limited flexibility elsewhere within the system to respond to a generation shortfall. This becomes particularly acute from the early 2020’s when most coal plant is expected to close and additional nuclear capacity is decommissioned<sup>2</sup> leaving gas-fired generation is the key source of flexible generation.

The outcome of the capacity mechanism auction for 2018 resulted in 45%<sup>3</sup> of the capacity being provided by gas-fired plant, this is expected to increase in coming years.

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<sup>1</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2012/11/gas-sos-report\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2012/11/gas-sos-report_0.pdf)

Page 78 para 1.17 & 1.18

<sup>2</sup> EDF group Reference Document 2014 Annual Financial Report p94 ([link](#))

<sup>3</sup> <https://www.emrdeliverybody.com/Capacity%20Markets%20Document%20Library/T-4%202014%20Final%20Auction%20Results%20Report.pdf>

**Are there any errors or omissions in this Modification Report that you think should be taken into account?** *Include details of any impacts/costs to your organisation that are directly related to this.*

It is not clear to what extent the potential growth in flows into Teesside as a percentage of total supply has been considered in the analysis, from 8 % today to potentially 16% in the mid 2020's

**Please provide below any additional analysis or information to support your representation**

Energy UK acknowledges there are diverse perspectives and competing objectives in relation to these modifications and wider policy issues. The impact, if any, on the Relevant Objectives appears to be minimal so any assessments will need to be made against Ofgem's wider statutory duties, potentially establishing a trade-off between sustainability objectives and competition objectives which are best supported by the appropriate allocation of costs.

This is further complicated by the fact that the removal of CO<sub>2</sub> either offshore or at the onshore processing facility by the methods suggested by the proposers will lead to additional emissions if natural gas is used to provide the heat required. There has been some assessment of low-carbon sources of heat but these seem to have been rejected. The workgroup are not experts in this area so it is difficult to say if this is sufficiently comprehensive. For example, are new techniques being developed that may be viable by 2020 or might it be possible to capture the CO<sub>2</sub> for purification and sale - a joint venture with Air Products or BOC perhaps. Ofgem may wish to take further advice on these technical and commercial issues, which may be pivotal in informing its decision.

It is also the case that there are potentially conflicting objectives between Ofgem and DECC/ government. It is interesting that these have been highlighted in the recent CMA provisional findings and remedies reports<sup>4</sup>.

*Remedy 17 – Introduction of a formal mechanism through which disagreements between DECC and Ofgem over policy decision-making can be addressed transparently.*

Whilst this is currently being consulted upon we hope that resolution of any such issues can be made rationally and transparently to promote regulatory stability.

We also note that CMA remedy 16 proposes increasing Ofgem's responsibility to promote competition as a primary objective to avoid inefficient trade-offs between competing objectives.

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<sup>4</sup> <https://www.gov.uk/cma-cases/energy-market-investigation>