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Dear Colleague,

NGC and Transco system security strategies for winter 2002/03

The Electricity Act 1989 (as amended) places a general duty on the National Grid Company (NGC) to develop and maintain an efficient, co-ordinated and economical system of electricity transmission. Special Condition AA4 of NGC's Transmission Licence requires it to operate the electricity system in an economic, efficient and co-ordinated manner. In addition, under Standard Condition 7 of its licence, NGC is required to promote the security and efficiency of the electricity generation, transmission and distribution systems in England and Wales. The Gas Act 1986 (as amended) places a general duty on Transco to develop and maintain an efficient and economical pipe-line system for the conveyance of gas. Under Standard Condition 9 of its licence, Transco is required to establish transportation arrangements to facilitate the achievement of the efficient and economic operation of its pipe-line system. In addition, under Standard Condition 16 of its licence, Transco is required to meet the peak aggregate daily demand, which is only likely to be exceeded once in twenty years (1 in 20 peak) taking into account data on weather derived from at least the previous 50 years. Following Ofgem's direction to amend Transco's Gas Transporter licence on 27 September 2002, Transco is now required under

Special Condition 27 to operate the gas system in an efficient, economic and co-ordinated manner.¹

On 20 May 2002, Ofgem wrote to Transco and NGC requesting the electricity and gas system operators to provide an analysis of the operation of the electricity and gas systems for the 2002/3 winter, in the light of their general duties and licence conditions. This follows a similar request to NGC and Transco in relation to winter 2001/2.²

Ofgem asked NGC and Transco to compare and co-ordinate the underlying assumptions in their analyses and to ensure that they considered not just the actual behaviour of market participants under New Gas Trading Arrangements ('NGTA') and New Electricity Trading Arrangements ('NETA'), but also the potential behaviour of such participants. Ofgem specifically asked Transco to confirm that it could operate the gas system during winter 2002/3 without any further changes to the gas balancing regime.

NGC and Transco report about system operations for winter 2002/03

On 23 July 2002, NGC and Transco sent Ofgem a joint report entitled, *'Interactions Between Gas and Electricity National Transmission Networks. Winter 2002/03'*, which updates the information provided last year by NGC and Transco about system operations for winter 2001/02.

¹ *'Transco price control and NTS SO incentives 2002-07. Licence modifications'*, Ofgem, September 2002.

² Transco and NGC's analysis of system operation for winter 2001/2 was published as an appendix to Ofgem's February 2002 document, entitled "The New Gas Trading Arrangements, Reform of the gas balancing regime, Revised proposals".

In their joint report and in both NGC's and Transco's covering letters to Ofgem accompanying their joint report, NGC and Transco stated that they could operate their respective gas and electricity systems in a safe, economic and efficient manner for the coming winter, subject to some concerns about NGC's reliance on secondary fuel capabilities if certain locational transmission constraints were to develop. In a subsequent letter to Ofgem of 20 September 2002, NGC has also indicated that 'there is very little experience under NETA of actual use of secondary fuels' and that this issue has been stressed with the Department of Trade and Industry ('DTI') as part of its review of the 'Fuel Security Code'.

In its covering letter, Transco confirmed that 'adequate tools are available to enable Transco to meet its licence obligations for the 2002/03 winter', without alteration to the existing gas balancing regime. It also stated that 'it has adequate balancing tools available to ensure safe and secure operation of the network for the forthcoming winter'. However, Transco maintained that the extent and unpredictability of within-day variations in flow rate at both network entry and exit points continues to cause concern. In this respect, Transco remarked that the introduction of an Incentivised Nomination Scheme³ as well as further potential measures considered under Network Code Review Group 0513 "Reform of the Energy Balancing Regime" represent important developments in this area. On 23 September 2002, Transco sent Ofgem a further report entitled, 'Potential Gas Supply Shocks Outside Transco's Control', which set out the factors that Transco believed could affect the reliability of gas supply over the coming winter, and which it believed it could not fully control.

³ Ofgem directed Transco to implement Network Code Modification 0479, 'Incentivised Nomination Scheme' from 1 October 2002.

Under emergency conditions associated with a large-scale gas supply failure NGC and Transco suggested that security of supply for both gas and electricity consumers could be improved by making better use of the within-day variation in supply and demand for gas and electricity. NGC and Transco stated that the winter load duration curve for electricity suggests that if gas supply interruptions to power stations could be restricted to 20 out of 24 hours (i.e. not interrupting gas-fired power stations over the electricity demand peak) a significant proportion of risk could be removed. To implement this option and to protect the security of supply for both electricity and gas customers, NGC and Transco maintained that the following actions should be taken:

- consider amendments to the 'Fuel Security Code' to ensure that the provision for alternate fuels at gas-fired power stations will allow their operation to be optimised in an emergency; and
- establish detailed cross-industry working arrangements and emergency powers such that both networks can be operated to maximise security of supply. The recently established 'Gas Industries Emergency Committee' was cited as a model that met the requirements identified by NGC and Transco.

Ofgem's view

Ofgem is pleased that Transco and NGC's have confirmed that they have carefully assessed their system operations for winter 2002/03 and are fully confident in their ability to operate their

transmission systems consistent with their statutory duties. We note in particular that Transco does not consider further action is required to alter the gas-balancing regime before this winter.

We have attached to this letter a version of NGC and Transco's joint report on 'The interactions between Gas and Electricity National Transmission Networks Winter 2002/2003', with the commercially confidential and market sensitive information removed. The joint report was produced in July but NGC and Transco do not consider that there have been material changes in relation to matters specifically addressed in the report. Also attached, is a copy of Transco's further report on 'Potential gas supply shocks outside Transco's control'. NGC and Transco have agreed to present the main elements of their reports at their next Operational Forum meetings.

As regards NGC and Transco's suggestions for reducing security of supply risk under emergency conditions, Ofgem is already participating in the DTI's review of the 'Fuel Security Code' and will discuss with the DTI the appropriateness of NGC and Transco's suggestions about amending the Code and establishing cross-industry emergency arrangements.

Ofgem is currently taking forward work to reform the exit regimes. Transco has a reasonable endeavours obligation under Special Condition 28B of its Gas Transporter licence to introduce universal firm exit capacity rights by 1 April 2004. Under these arrangements it is envisaged that Transco would be able to make efficient trade-offs between demand side interruption, pipeline investment and use of LNG for balancing the system. Ofgem has proposed the introduction of a 'deep' System Operator function for NGC from April 2003.⁴ Ofgem believes that its proposals to

⁴ "NGC system operator incentive scheme 2003/04 – 2005/06, Initial consultation document", Ofgem, October 2002.

reform the gas and electricity exit regimes will improve the efficient achievement of security of supply.

If you have any questions about the issues raised in this letter or the attached reports please contact me on the above number or Samanta Padalino on 020-7901-7033.

Yours sincerely

Paul Smith
Head of Market Surveillance