June 2001

Review of Transco's price control from 2002

Draft proposals

Appendices

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Appendix 1 Summary of responses to Initial Thoughts paper February 2001

Subject	Comments
Form & Scope of Transportation Controls	Favour separate controls for NTS and LDZs as being in customer's best interests. Consider that separate controls for individual LDZs will provide better comparitors for regulatory purposes and improved benchmarking for improvements in service. Believe it may also facilitate sale of LDZs and inter-company comparisons. Support proposals for NTS incentives and exit code, subject to full consultation. Believe there is no obvious need for specific emergency service control – efficiencies may be determined by comparison with other emergency services.
	Believe regulation should be kept to minimum and account taken of compliance costs for separate price control regimes. Express doubt as to whether separate price control regimes for individual LDZs are cost effective. Believe Transco should be incentivised to minimise costs in its system operator role for NTS through the new gas trading arrangements workstream.
	Supports separate controls for NTS and LDZs creating a transparent structure for efficiency savings, but concerned that the following issues should be addressed: possible loss of economies of scale possible duplication of central functions capital markets may start to distinguish between different parts of Transco, possibly affecting Transco's cost of capital. the introduction of contractual relationships may increase Transco's costs cross subsidies may occur from ill-defined separation and certain consumers may pay higher charges possible conflicts between NTS and LDZs for resources supports SO split, but SO role needs to be clearly defined a rethink of duration of price control may be consequence. Believes the emergency service is a natural monopoly and provision of this service should not be compromised. Any analysis of extending the network should consider the wider social welfare arguments in addition to conventional economic ones.
	Favour separate price controls for NTS, LDZs, SO and TO roles and separation of metering and meter reading services. Believe this would aid transparency, identification of costs and introduction of competition. Believe that indicative date of April 2003 for introduction of separate controls for LDZs may not allow sufficient time for collection of objective benchmarking data. Believe that different forms of price control are appropriate to reflect the different business drivers in relation to SO and TO functions. However, incentive based scheme not appropriate for multiple functions of the SO. Suggest that Emergency Service remains subject to price control since no effective competitors to Transco in this area.
	Support separate price controls for NTS and LDZs to assist in targeting costs. Support RPI-X form of price control for NTS with capacity-based output measures. Doubt that meaningful investment signals can come from long term capacity auctions. Do not support separate price controls for TO and SO roles, which would otherwise lead to economic inefficiencies. As such, separate NTS SO control would not provide incentives for efficient management of this operation. Recognise need for system balancing incentives but Transco should have discretion as to how to achieve efficient balance. Recognise that separate price controls for LDZs not feasible at this stage. Support proposal for single RPI-X price control in meantime with incentives based on output measures. Believe that separating LDZ TO and SO price controls would compromise security of supply and be unduly complex. Suggest that separate price control for emergency services not appropriate.
	Support proposal to introduce capacity output measures, on the basis that such output measures would operate as incentives for capital investment. Agree that there should be a single price control for each of the LDZs. Believe that "micro-regulation" in the form of separate price controls would lead to inefficiencies.
	Support the separation of price controls for NTS and LDZs as a means of removing cross subsidies and achieving more cost reflective services. May be merit in further separation of price controls by individual LDZs to improve cost reflectivity.

	Consider that the retention of a volume driver as part of LDZ price control incentivises Transco to over-contract for interruptible services effectively creating a cross subsidy from firm to interruptible loads. Also support disaggregation of NTS to recognise separate roles of TO and SO but express concern about including gas balancing activities in incentives for SO. Believe that it would be difficult for system balancing and constraint management to be treated consistently under an Exit Code or other contractual arrangement in relation to loads directly connected to the NTS and within the LDZs. Believe it is appropriate to incorporate the LNG within the price control until a market for the provision of management of transmission constraints becomes established.
	Support the proposal for separate price controls for NTS and LDZs and for a single price control across all LDZs.
	Agree in principle to separation of NTS and LDZs price controls to facilitate efficiency incentives. State that it is unclear yet the extent to which this will increase complexity and consequently risk to shippers, suppliers and customers. Consider that separation of TO and SO functions within NTS has merit but operational issues require further analysis. As part of NGTA, it would be useful to gain clarification on how separate NTS TO and SO entities will relate to LDZs in the long term, so that conclusions can be fed into the price control review process. Content of Exit Code will affect service to shippers and development of Code should therefore be undertaken on industry wide basis. Separate price controls for individual LDZs could enhance LDZ performance but could also be achieved by internal (Transco) incentives and effective management. Potential complexity and volatility arising from separate controls might effect transportation charges, which in turn may have detrimental effect on end consumers. Believe it would not be appropriate for Transco to pass through formula rates or licence fees since non-controllable costs are an aspect of any business. Favour retention of RPI-X approach to price control and the addition of output measures to underpin performance standards. Believe that provision of emergency services should remain under main price control and that recourse to Competition Act should be reserved as a last resort by the regulator.
	In favour of separate controls for NTS and LDZs. The implementation of separate controls would depend on collection of robust data. Support for linking price controls to defined output measures. Believe that such measures should extend to the service provided to shippers and be reviewed periodically during the price control period to reflect changing circumstances. Believe it is not sufficient to rely on capacity auctions alone for determining investment signals (citing under-investment at St Fergus as an example). Concern about LNG and SO being managed by the same business in that it creates an incentive to keep prices high and volatile in order to stimulate the market for risk-management service providers such as LNG.
	Contend that separate controls for NTS and LDZs, the introduction of separate LDZ controls and separation of TO and SO functions within NTS only justified if customer benefit exceeds the additional cost of implementation and ongoing regulation.
	Support splitting NTS and LDZ price controls and for price caps on metering charges while competition develops.
	Support the separation of price controls between transmission and local distribution and would prefer separate controls for each LDZ. Believe that further disaggregation of price controls for each LDZ would require separate performance targets and individual price controls underpinned by an agreed allocation of Transco's RAV. Suggest that April 2002 should remain the target date for introduction but, otherwise, early in the next price control period. An incentive regime to support performance levels should be linked to price controls and guaranteed standards as part of an overall regulatory framework. Agree with the provision for pass through of formula rates and licence fees.
	Support the separation of price controls for NTS and separate LDZs. Agree with aggregated LDZ price control from April 2002, given the limited information and timeframe available until next price control period. Suggest that differential charges for LDZs should be cost reflective. Suggest there should be a mechanism to claw back profits from any future sale of an LDZ at a price substantially above regulatory value. Believe that RPI-X is appropriate for LDZ price controls. However, to base Transco's income on revenue drivers such as capacity auctions is to incentivise them not to invest. Believe that the revenue driver should remain 'gas throughput' to be consistent with meeting customer needs.

	Do not consider that there is a need for separate price control for emergency services as there is sufficient protection for customers in the terms of the licence and HSE requirements. Competition Act protects other transporters.
	Welcome separation of NTS and LDZs. Agree with single LDZ price control at this stage and further consideration to disaggregating to individual LDZs. Believe differential charging at LDZ level may add complexity to market and act as a barrier to entry. Believe that separation of TO and SO roles is vital to reform of gas balancing regime and must be considered at earliest opportunity. Believe that RPI-X approach is appropriate for NTS as a system of price control based on output measures but may be unduly complex and costly to monitor. Concern that the risk and costs for participants in long term capacity auctions may create barriers to entry, which needs to be weighed against benefits of theoretical pricing signals. Believe a detailed cost benefit analysis is required. Support the development of a targeted incentive scheme for SO separate from the overall Transco price control. Express concern that disaggregated price control for LDZs could result in increased costs for customers in some areas. Also express concern that the increased use of output measures creates additional complexity which, when added to proposed use of output measures for NTS, may make pricing of transmission and distribution more complicated. Suggest that LDZ output measures used should therefore be simple and transparent with information on performance available to market participants. Agree with need for further consultation on implementation of LDZ price controls. Suggest that if LDZs were separated then appropriate for LDZs to be responsible for system operation for their own network, or to contract operation to a third party. Note that disaggregation implies LDZs are responsible for safety for their part of network and the interface with NTS is critical in this respect. Believe that Transco should be obliged to provide an emergency service if requested and that users meet all "reasonable costs". Reliance on Competition Act would not be appropriate. Believe that use of LNG should remain a commercial service outside the price control and that Transco should pay a commercial rate for this service.
	Express concern about the ability of the proposed price control to provide adequate development in capacity and extent of the distribution network. While the RPI-X approach creates strong incentive for efficiency in maintenance of network assets, it weakly incentivises programmes for capital expenditure that are required to develop the network and may even incentivise Transco to delay capital investment. Welcome moves to introduce incentive-based approach to regulation of both NTS and LDZs but output measures too narrowly focussed on interruptions with limited incentive for network development. Suggest that the regulator move away from RPI-X formula approach and establish a system of performance-based regulation with powerful incentives to develop and expand existing network.
	Welcome the proposed separation of price controls for NTS and LDZs. Support the move towards separate price controls for LDZs as soon as possible, given that this will stimulate competition. Agree that the RPI-X form of price control should be applied for the control period. Believe that Transco should be incentivised to develop sufficient flexibility for NTS to be able to respond quickly to changing patterns of supply and demand. Concern at the possibility of setting the revenue driver below 50%unless alternative incentives are provided for Transco to invest in supporting growth in the gas market and network.
	Agree with the proposed separation of NTS and LDZ price controls. Believe that the option to introduce individual price controls for LDZs should be available during the next price control period, to allow for future unbundling.
	Emphasise the need for price controls to provide incentives to extend the gas network to advance the social objective of eliminating fuel poverty. Believe that priority should be given to rural communities. Suggest that the wider social and environmental objectives for eliminating fuel poverty (within 10 years) and reducing carbon dioxide emissions (by 2002) should be factored into the price control formula.
	Support separate price controls for NTS and LDZs from April 2002. Believe that price controls for LDZs should be performance based and be implemented prior to April 2004. Support separate price controls for individual LDZs in the next review period to facilitate benchmarking. Express doubt about Transco's practical non-readiness to implement separate LDZ controls. Do not perceive any benefits from separating SO and TO roles as this may lead to

	confusion and inefficiencies. Express doubt that benefits of having an Exit Code would outweigh the development and ongoing costs. Suggest that competition in provision of emergency services is undesirable in that it may lead to fragmentation of a critical service.
	Support separate NTS and LDZ prices controls and move to separate LDZ controls in next review period. Support for the retention of RPI-X form of price control for NTS while performance based control is under development. Believe that incentivising capital expenditure efficiency via a capex rollover mechanism would be appropriate and express concern that it was not discussed in the paper. Agree with move towards separate LDZ controls, which will accelerate separate ownership and facilitate competition. Believe that there should be separate price control for connections business for each LDZ with the aim of opening up competition as soon as possible. Believe that the Competition Act powers are sufficient regulation for provision of emergency services.
	Express view that any form of price control will need to allow for sufficient revenue to enable Transco to maintain safety standards and statutory duties under relevant health and safety legislation. Note that separation of TO and SO roles or changes in exit capacity regime may require revision of Transco's accepted safety case. Agree that any price regulation of an emergency provider should not affect the provision of a free national phoneline for reporting gas escapes. Express view that any price control should allow for sufficient revenue to comply with requirements of Gas Safety (Management) Regulations. Consider that separate price controls for metering and meter reading should allow sufficient revenue to maintain current safety standards and competition should not be at the expense of safety. In respect of separate LDZ price controls,: Believe that mains replacement policy should be considered in relation to LDZs as a whole; Do not want regional variations in safety performance.
	Support the establishment of separate price controls for NTS and LDZs collectively, subject to clear demarcation of controls and robust methodology for asset allocation to each control block. Support separate price controls for SO and TO roles provided there is a clear definition of respective roles. Support price control based on a combination of RPI-X, adjustments to existing output measures and new output measures where appropriate. Suggest there is scope for efficiency gains by use of RPI-X in areas where not possible to identify appropriate outputs to incentivise. Believe that NTS SO function should be incentivised by exposure to the effects of their actions through the balancing regime. Believe that there should be a single price control covering all LDZs and that a volume-based driver is still appropriate. Do not support separate LDZ controls. Believe that the only advantage would be to facilitate restructuring and that this is not a valid regulatory objective since individual LDZs would themselves remain local monopolies. Believe that LDZs should remain responsible for their own networks although in practice this will require clear definition of SO and TO roles. Do not support separate price control for emergency services. Argue that service is provided at marginal cost by Transco and regulation within a single control is more effective to prevent breach of licence or Competition Act obligations. Suggest a hybrid form of control for LNG with a feedback element to Transco's main price control.
	Support the introduction of separate price controls for NTS and LDZs as this removes the cross subsidies from current business activities. Support the separation of NTS in TO and SO controls. Doubt that full separation of LDZs is feasible within the next price control period but could be introduced at a later date once reliable data is available on LDZ costs and performance. Believe that RPI-X is the right form of price control for both NTS and LDZ if it contains an appropriate adjustment mechanism. Support the incentivisation of NTS SO by NGTA balancing regime. Believe that safety of the network must remain a priority and therefore emergency services should remain within the current price control. Agree that a decision regarding LNG should be deferred until market competition is

	established.
	Support price controls for NTS and LDZs with further disaggregation of costs within NTS to recognise separate roles of SO and TO. Believe that there are benefits from having separate LDZ controls and agree that there should be no adjustment to the aggregate level of allowed revenues. Support RPI-X form of price control in respect of both NTS and LDZ activities and welcome the move to pre defined output measures. Argue that proposed reform of exit capacity arrangements will not be completed before the price control is set and will therefore not be possible to quantify output measures. Welcome the proposals to specify a level of entry capacity but express doubt that an adjustment mechanism based on investment signals from long term auctions will be reliable and effective. Agree that LDZs should be responsible for the operation of their own networks. Do not agree that it is necessary to separately price control the provision of an emergency service and that the Competition Act provides sufficient safeguards. Support the idea of LNG being incorporated as part of NTS price control. Believe that specific regulation would be likely to hinder competition.
Metering and Meter Reading Controls	Support price capping for individual metering services until effective competition has been achieved in the market. Believe all metering activities should be included in price control. Believe it would be unsatisfactory to separate metering activities if Transco retained a commercial advantage by reason of a dominant position as well as benefiting from de-regulation. Believe that "effective competition" should be defined as a level of market share to be achieved by Transco's competitors.
	State that continuation of price controls in metering and meter reading would distort development in competition. Competition Act powers should be sufficient to manage concerns arising from removal of price controls and dominant market position.
	Price controls for metering should continue for so long as competition is not fully effective. With splitting the control into baskets, there may not be a new entrant capable of providing a total metering service.
	Agree with continuation of price control for metering and meter reading on basis that competition not yet established and is unlikely by April 2002. Believe Transco's use of discretion in setting charges under tariff basket approach should be monitored to ensure competition is not being limited. Suggest it would be desirable to have pre-defined level of competition before price controls could be removed.
	Support the tariff basket approach to allow Transco some discretion in setting charges. Suggest that charges for industrial and commercial metering be subject to an average price cap. Support continued price control for meter reading activities subject to annual review.
	Suggest three price control categories or "baskets" for meter reading activities – DM meter reading, non-monthly NDM meter-reading and monthly meter reading (DM & NDM). In relation to DM meter reading, suggest that price controls remain beyond March 2002 having regard to the Transco monopoly in this area. In relation to non-monthly NDM meter reading basket, suggest that price control be lifted as soon as possible and not re-applied after March 2002. On monthly meter NDM, price controls should be lifted subject to assessment of extent of competition in this market. Believe that new services should not be included in regulatory framework for reasons of parity with other service providers. Believes that there is danger Transco will withdraw from meter reading market in response to over-regulation. Competition is unlikely in metering provision, installation and operation within the next year and price control should be extended beyond March 2002. Express doubt that competition will be sufficiently advanced within proposed two-year period of price control.
	Agree with withdrawal of price control in relation to services, which are open to competition but if price caps are to continue, then they should be based on an assessment of efficient costs rather than on average historical revenue.
	Oppose removal of price control for metering at this stage.
	Believe price controls should apply to all metering and meter reading services until competition demonstrable, indicated by loss of market share to below 50%. Believe new services should not be included in price control without good cause.

	Believe it is appropriate to use price caps for metering services or baskets of services, as this does not prevent price reductions as competition develops. Suggest that price control should apply to all services currently provided under licence
	Believe that if metering and meter reading are fully open to competition, price controls only necessary to the extent that they help overcome barriers to competition, but may have opposite effect if too rigid or severe. Believe that if controls are necessary, then they should not be too complex and define clear criteria for determining when effective competition has been secured. Argue that controls should be lifted as soon as the criteria are met.
	Welcome competition in metering to the extent that it reduces prices but should not be at expense of service standards. Believe that there should be incentives for the introduction of new and more accurate metering technology and provision of information to consumers on energy efficiency but the benefit of these developments should not be limited to those who can afford to pay higher chargers for such services.
	Believe that price control for metering should be removed from April 2002. Suggest that Transco should have incentive to introduce value-added metering services without constraints of price control. Believe that meter provision and operation should be price-controlled from April 2002. Believe that the division of metering/meter reading into five baskets for price control purposes is too complex and would prefer two categories of domestic and non-domestic only.
	Support continuation of price controls to Transco's metering and meter-reading services from April 2002. Believe that any new services should be initially exempt from control but subject to review. Any controls should depend on the extent of Transco's dominance in respect of specific services and whether there is any element of cross-subsidisation from other parts of the business. Express preference for a revenue control with adjustment to revenue for the marginal costs associated with any loss of market share.
	Believe that it will be necessary to apply controls after April 2002, as a number of areas will not be subject to true competition by then. Believe that only services where there is effective competition should be excluded from the controls after April 2002. New metering activities should only be excluded from price control if genuine competition exists. Advocate a capped price control for each basket of services, but should allow headroom for competition to develop. Agree that the tariff baskets identified in the paper are appropriate
	Support in principle the removal of metering and meter reading services from price control regulation once competition is fully established, as determined by an industry survey. Suggest that any review of price control regulation should differentiate between domestic and industrial/commercial markets as these may differ. Believe that whether new services should be subject to price control would depend on whether effective competition applies to the new service. Support the view that regulation should take the form of a price cap on individual services with separate regulated tariffs. The tariff baskets approach is reasonable but suggest a further division due to the wide variation of meter charges within I&C metering.
	Concern that there is no clear criteria for determining when effective competition has been reached but believe that criteria should be based on level of contestability in the market rather than market share alone. In this regard, believe that there is no need for continuing price control for either metering or meter reading. Do not believe that it is necessary to apply separate price caps for all services and support a reference tariff on a limited number of individual services. Believe that the tariff basket approach adds complexity and will hinder the removal of price regulation. Believe that new metering and meter-reading services should be excluded from price control. Agree that it is appropriate to remove control from non-daily meter reading from April 2002. If price controls are to be applied to metering and meter reading then they should be limited to two years.
Output Measures	Agree with output based incentives but require more precise definition. Suggest that a measure of planning accuracy and an efficiency measure for work in

	highways also desirable.
	Suggest that LDZ output measures would improve information by Transco on quality of supply and network performance and provide incentives to deliver an appropriate level of service to customers. Believe that the overall number of outputs measured and associated reporting requirements should be limited so that compliance costs are commensurate with anticipated benefits. Argue that the number and duration of non-contractual interruptions is the most relevant measure of service. Believe that any financial incentives/penalties should provide compensation to parties affected by the interruptions and be incorporated in the statutory, licensing or Network Code arrangements that define the relevant standards rather than as part of the price control mechanism. Otherwise, any incentives under the price control mechanism should be in addition to compensation payable to customers. Agree with the collection of data on other output measures for shipper services and safety for monitoring delivery between reviews. With regard to shipper services, agree that an appropriate output measure is the percentage of shipper queries resolved by Transco within 10/20 days. Agree that there are benefits from retaining and developing capital expenditure monitoring outputs.
	Support in principle for output or other performance measures. Believe that determination of initial output measures for NTS in particular is critical for establishing allowed revenues under price control and other anticipated changes to price control regime.
	Supports emphasis on output measures and that non-contractual interruptions should form the basis of LDZ price control. Concerned that the service levels consumers receive in the various LDZs will be unacceptably varied. Meter fault/repairs are the biggest contributory factor for supply interruptions – would like to see how this is affected by liberalised metering market with non-Transco meter providers. Support collection of data and medium term performance report. Any system of penalties must be seen to come out of profits not smearing of costs.
	Believe that the interaction of various incentives need to be rationalised to avoid either over-rewarding or exposing Transco to double jeopardy. Agree with proposed 2% of price controlled revenue as appropriate level of incentive for performance against output measures.
	Support setting further output measures, which will help Transco to incorporate market signals into decisions about expenditure.
	Support output measures for NTS capacity but should allow for adjustment during price control period to reflect changing dynamics of gas flow at entry. Note that exit regime will be new and there may therefore be unforeseen effects as some plants which are currently interruptible wish to go firm and vice versa, making pre-determined exit output measures obsolete.
	Believe that use of output measures to incentivise performance would be appropriate, in particular: Favour an entry capacity output measure. While equitable that Transco have discretion to reinvest or buy back, investment should be incentivised. In favour of monitoring and reporting on continuity of supply outputs for LDZs, supported by a guaranteed standard. Support the output measure of planned interruptions. Believe interruptions resulting in third party damage and interruptions due to meter faults or activities should be monitored. Support dis-aggregation of interruption output measures to facilitate analysis of trends, with reporting on all non-contractual interruptions subject to cost benefit analysis. Support for monitoring of output measures between reviews including measure of accessibility of data and speed of shipper query resolution based on the 10/20 day bands. Believe it is worth considering some quantification of value associated with shipper queries since more difficult queries tend to have more significant value to the shipper and are often dealt with more slowly. Suggest that both transportation and operational queries should be monitored as these are linked. Agree that Transco should be required to report on a range of medium term performance measures, to be developed in conjunction with Transco. Believe it would be appropriate for Ofgem to appoint auditors to ensure consistency in reporting. Agree with the development of output based incentive scheme based on relative LDZ performance.

	Support output measures to incentivise a reduction in system outages but express concern that the level of information required to monitor output measures may be too onerous. Suggest relevant performance measures for standards on metering should be split between Transco owned and non-Transco owned meters to ensure uniformity of standards is achieved. Support measures such as accessibility of data and speed of query resolution but stress that quality of outcome is as important to resolving customer-facing issues as the speed of resolution and suggest that both aspects be reported upon. Note that the 10/20-day target for resolving queries represents the business needs of shippers and that customer issues could not be resolved in a shorter time. Suggest that standards for invoicing queries at least equivalent to standards for operational queries are required. Believe that quantity of leakage is one of the best measures of gas safety and performance of networks and that an independent survey should be conducted on a regular basis to provide current assessments on the quality of the network, efficacy of mains replacement programme and quantity of shrinkage. Support proposal for regular reporting on condition of NTS and LDZ networks, based on a combination of predetermined measures and discretionary comments. Suggest that the regulator consider alternatives to 2% variable revenue on outage performance since the end user will ultimately bear the costs of such an incentive.
	Agree that LDZ non-contractual interruptions should be reduced by way of penalties for failure to meet guaranteed standards in respect of continuity of supply. Payments should reflect the costs incurred by the customer, which will be commensurately higher for industrial and commercial customers.
	Agree with introduction of incentives to perform against specified output measures, which should, however, be consistent with the Network Code. Believe it would be appropriate to use Competition Act powers to review provision of emergency services to gas transporters.
	Support in principle output measures in relation to LDZs but apparent inconsistencies with IIP proposals (e.g. safety part of proposed output regime but not in electricity industry). Believe that a long-term incentive regime would maximise economic benefit.
	Believe that output measures must be carefully defined to reflect the needs of gas producers, shippers and final consumers. Argue that competition will deliver the greatest benefits to customers in the long term and the output measures must therefore facilitate competition. Suggest that incentives are needed to deliver capacity enhancements for entry and exit capacity and to operate an efficient system.
	Suggest that output measures for LDZ should be considered in conjunction with outputs and incentives for NTS to ensure consistency. Support the measures set out in Appendix 3 of the paper but suggest that time for resolving (99%) shipper queries should be reduced to 5 days for queries received and 10 days for resolution. Welcome medium term performance measures in Appendix 4. Believe that the financial impact of system unavailability should also be tracked and recorded. Suggest need for separate performance measures in relation to system operation and gas distribution. Suggest that output based measures be introduced in time for next price control review. Support the use of financial incentive up to 2% of LDZ price controlled revenue if it does not impact on cost of capital.
	Agree that Transco should be incentivised towards medium and long-term development of gas network and that this requires a clear definition of relevant output measures. Suggest that above target performance should be rewarded as well as below target performance penalised.
	Support the introduction of output measures and consider that the proposed entry and exit flow measures are appropriate for NTS; the proposed non-contractual interruption output measures are appropriate but should extend to all non-contractual interruption regardless of cause and the acceptable level of outages altered accordingly.
	Support the creation of financial incentives based on measurement of customer interruptions, both number and duration, and inclusion of third party damage. Agree with principle of compensation payable by Transco for interruptions due to third party damage.

	Agree with fixed level compensation to domestic customers at, say, £25.
	State that incentivised performance measures should only include types of interruption which are influenced by management action. Argue that to include interruptions which are outside management control will increase business risk and hence the cost of capital. Support allowing Transco the flexibility in determining the content of a medium term performance report, to avoid unnecessarily increasing the burden of reporting. Believe that the timetable for the introduction of output based incentives should be a minimum of two years to allow adequate time for collection of sufficient, high quality data as the basis for setting targets. Believe that no amount of revenue should be at risk until measurement systems and the incentive framework is robust. Believe that for an efficient incentive mechanism to be developed, an assessment of customer's willingness to pay for quality improvements must be undertaken. Express the view that, without this assessment, any incentive to drive improvements beyond the willingness of customers to pay for those improvements would be perverse. Support the use of absolute measures and the principle that out-performance should be at additional cost to customers only if they have already indicated a willingness to pay for improvements.
	Agree with proposal not to introduce incentives for safety related performance. Believe that any guaranteed or overall standards of performance must be consistent with statutory health and safety requirements. Welcome incentives leading to reduced third party damage to gas transporters' pipes.
	Support the output measures as defined in Appendix 3 of the paper. Believe that a small number of measures is appropriate but kept under review. Suggest that some operational standards would be better placed in the Network Code standards. Support the collection of medium term performance and condition report for NTS and LDZs. Believe that the output-based incentives should be introduced as soon as possible in the new control period with an annual review. Support the concept of a linkage between standards and 2% allowed revenue but consider that Transco should not be rewarded simply for attaining a standard.
	Support the introduction of monitoring measures between reviews, as this will give the industry information to negotiate appropriate performance incentives with Transco under the terms of the Network Code. Believe that the introduction of incentives should occur before the proposed date of April 2004. Agree with the concept of financial incentives in relation to output measures being a percentage of allowed revenue but need clarification on rationale behind the 2% proposal.
	Believe that the regulatory framework should incorporate incentives to drive and reward actions that customers' value. Therefore, broadly support the objectives for introducing output measures and associated incentives. Concern that the proposed introduction of an incentive regime could lead to uncertainty and risk. Identify some key requirements to minimise this risk. Consider that measures could include both the number and duration of interruptions but only "upstream" of the meter, i.e. not appropriate to include interruptions related to meters. Believe that only unplanned interruptions within Transco's influence should be included in the measure and describe excluded interruptions. Believe it would not be appropriate to implement an incentive regime in relation to non-contractual NTS interruptions. Agree that disaggregation of output measures would provide valuable information about Transco performance but note that this would require new systems. Believe that whether the likely benefits will exceed costs needs to be taken into consideration. Agree that safety should not be subject to additional financial incentives. Agree that Transco should have discretion to choose appropriate measures of medium term performance and to add supporting information. Disagree that it would be necessary to include an environmental report in the supporting narrative. Questions why the regulator does not consider ISO9001 accreditation to be a sufficient demonstration of medium term performance. Argue that the lead-time for developing an outputs regime depends on the complexity of the reporting requirements but believe that 12 months lead in time may be insufficient. Believe that to be fully effective, any incentives should operate symmetrically,

	offering rewards for good performance as well as penalties for sub-standard performance.
Guaranteed and Overall standards of Performance	Agree that current standards should be reviewed and applied to all gas transporters. Suggest that guaranteed standards should be applied “sparingly” initially, to assess the effect on business performance. Suggest that standards should apply to domestic and small business customers. Argue that standard for reconnection must be balanced against safety concerns to avoid incentivising performance to the detriment of safety and other factors. Note that reconnection times will vary within large groups of affected customers and estimating times is therefore difficult. Express doubt that benefits will outweigh costs of implementation. Suggest that standards for controlled and uncontrolled escapes should be combined within an overall standard although significant resource implications for Transco. Argue that there is no evidence of significant competition in connections market and there are significant barriers to entry. Therefore, regulatory standards are necessary and should be maintained until competition is evident and sustainable in relation to connections. Agree with metering standards for Transco in 2001. Agree that standards should be applied at LDZ level. Agree that qualitative measures too difficult to formulate and independent surveys more appropriate.
	Suggest that there should be consistency between gas and electricity markets in the guaranteed and overall standards of performance. On specific proposals: Do not support standard of 90% complaints to be resolved within 10 days due to diverse nature of complaints. Do not support standard on notification of right to compensation – compensation should be based on claims made by customers. Support gas safety standards in form of overall standards of performance and reporting/monitoring at LDZ level. Coverage should be limited to smaller customers not in a position to negotiate specific requirements. Support a standard for telephone response times but with exemption for “exceptional circumstances”. Standards should apply at LDZ level. Qualitative standards would be difficult to define and monitor. Support customer surveys. Do not support compensation based on load size since unduly complex to administer and unnecessary on basis that standards should only apply to smaller customers.
	Supports carefully defined standards. Consumers need to be able to understand easily the levels of service and compensation. Whilst Transco has met its existing standards we would like the regulator to take into consideration complaints about Transco which energywatch receives. Would welcome additional standards for complaint handling standards for connection agreements informing consumers of their right to compensation payment to consumers for supply failures due to third parties. Believes it possible to construct robust qualitative standards
	Believe that in addition to efficiency measures, more focus is required on social and environmental objectives. Suggest that regulator should also consider a performance target aimed at encouraging investment in expanding the geographical reach of the network, and an overall obligation to establish a connection if it meets certain criteria. Support the inclusion of methane leakage as a medium term performance measure. Suggest that the regulator should consider ways of encouraging the development of natural gas fuel outlets in the UK.
	Believe that service standards on level and quality of service to consumers as well as shippers should apply. Express concern about the lack of accountability to consumers for actions of Transco employees and contractors. Argue that a good incentive scheme incorporates “carrot and stick” but no apparent reward for Transco in current incentive proposals.
	Support the introduction of additional standards in some areas, specifically complaint resolution, continuity of supply (including notification of reconnection times). Believe that it is not appropriate to include an obligation to inform customers of entitlement to compensation. Agree that metering standards are essential to ensure consistency with new metering

	standards for suppliers. Believe that guaranteed provision of meters within 4 days is not achievable in non-domestic market. Other standards appear relevant to domestic market only. Believe it is not appropriate to impose any additional standards in relation to the non-domestic market. In favour of dis-aggregating the service standards at LDZ level to show variations in service levels and comparative analysis. Suggest that benchmarking for comparing cost structures would need to allow for geographical variations. Believe it should be possible to set qualitative standards at a high level and to use these in conjunction with customer surveys. Compensation payments should adequately reflect the costs and inconvenience to customers and should be flexible to take account of different circumstances.
	Argue for standard in relation to third party interruptions requiring Transco to compensate customers but with right of recovery against third party. Consider that licensees should also be considered customers in terms of any standard on responding to complaints. Suggest that Transco be required to reconnect on a "reasonable endeavours" basis with specific requirements in relation to status updates and estimated times of reconnection. Need for clear and consistent definition of customer and that certain guaranteed standards should be applied to all customers regardless of size. Argue that the principle of cost reflectivity in compensation paid should apply equally to licensees experiencing difficulties in obtaining an adequate service from Transco.
	Believe that the relationship between service quality and cost must be reflected in guaranteed and overall standards and price control. Agree with the proposed use of customer surveys to determine customer priorities on service performance with the primary aim to establish value of marginal variations in service quality.
	Believe that both quantitative and qualitative requirements would be appropriate to define new levels of performance. Believe that the 2% of revenue at risk is appropriate to maximise performance. Suggest that the standards regime should allow for adjustment to service levels to reflect changing business needs. Agree with the need for improved information systems in areas of quality of supply and network performance. Believe that the development of new systems to support the new reporting requirements is overdue and must now be undertaken by Transco. Favour an internet-based platform to eliminate time lag in provision of information to shippers.
	Support introduction of guaranteed and overall standards of performance for Transco Network. Believe that coverage should be extended to smaller industrial and commercial consumers that lack the resources to negotiate service level agreements. Agree that compensation must reflect the costs and inconvenience to final consumers, especially industrial and commercial consumers that suffer direct financial loss as a result of failure to meet specified service levels.
	Support the use of existing standards together with new standards if benefits will outweigh costs (of systems for collecting data). Believe that NTS/LDZ as asset owners require separate performance measures from system operator roles. Standards should apply to all of Transco's customers (for example, shippers). Believe it would be appropriate to apply standards of performance for each LDZ in anticipation of dissagregation of price controls to individual LDZs. Support greater availability of information on emergencies at LDZ level so that suppliers can inform customers of reasons for outage and provide greater clarity to customers in defining responsibilities for dealing with emergencies. Oppose the use of qualitative standards. Agree that compensation schemes should reflect the costs and inconvenience to customers and believe that levels of compensation should be adjusted each year to reflect persistent under-performance. Support the use of differential in level of compensation based on level of consumption, but suggest the need for a simple scheme with compensation levels clearly defined.
	Agree that it would be appropriate to apply standards to each LDZ. Suggest that qualitative standards should not be discarded solely because their measurement is more difficult than for quantitative standards.
	Suggest creating an obligation for gas transporters to notify final customers when they may be entitled to compensation under the standards.

	Favour a model whereby the customer deals solely with the supplier to minimise contact with Transco. Agree in principle for minimum standards to apply to all gas transporters but may not be justified in view of relative size of other transporters and the potentially expensive systems required to track performance.
	Believe that the proposed standard for resolving customer complaints within 10 days may be unachievable, given that the standard for merely responding to customers is 5 days. Agree that standards should be applied at individual LDZ level. Suggest that compensation levels should be commensurate with the price paid by the customer for the service rather than focussing on costs and inconvenience.
	Agree with proposed standards but should be revalidated by regular reviews. Believe that domestic customers will benefit most under the standards and note that a standard compensatory payment is inappropriate for industrial and commercial users. Agree that collection of performance data on individual LDZs will enable an assessment of relative performance against standards. Believe that the collection of information on responses to emergencies will help to identify any issues, which may help to identify preventative measures. Suggest the issue of qualitative standards should be given further consideration to establish activities where this might be practicable.
	Believe that the scope of the current standards is adequate. Support the reporting of standards compliance at LDZ level but not separate standards for individual LDZs. Believe that qualitative standards should be included within the price control.
	Agree that standards should apply to all gas transporters to ensure minimum standards for all customers. Believe that for revised metering standards the emphasis should be on suppliers who in turn may wish to negotiate corresponding contractual obligations with service providers. Accept that individual LDZ standards may be appropriate in future. Believe that any proposal to treat existing national standards, as LDZ standards would be inappropriate as it implies a ratcheting upwards of general standards. Believe that the focus of guaranteed standards should be on unplanned or longer duration interruptions. Believe that the current standards should continue to apply until customers demonstrate a readiness to pay for any improvements. Note that informing customers of estimated reconnection times is complicated when large numbers of customers are affected and therefore a guaranteed standard may be inappropriate. Suggest that notification of entitlement to compensation is dependent on creation and maintenance of a customer database, which would need to be costed and developed. Believe it would be premature to implement reporting of response times on gas escapes pending clarification of HSE and Ofgem roles and that a single reporting requirement in relation to Ofgem and HSE would be appropriate. Oppose guaranteed standards for connections. Believe that any such guaranteed standard should in any case apply to all market participants, although this might inhibit competition. Believe that metering standards should focus on suppliers, consistent with the principle that the supplier should be the hub of all metering activities. Agree that standards for meter reading are unnecessary. Support a standards regime focussed on domestic customers. Believe that a move to two-hour time bands for appointments and telephone responses within 15 seconds would involve additional costs and that a cost benefit analysis would be needed before introducing such changes. Agree that qualitative standard would be inappropriate. Accept the principle of compensation for breach of guaranteed standard but believe that payment should be via the supplier rather than transporter.
Transco's Operating and Capital Expenditure	Argue that Transco should be actively incentivised to accelerate replacement of cast iron and ductile iron pipes since this is fundamental to safety and public perception of gas as a safe fuel. Suggest that shortage of qualified personnel is a constraint on delivery of mains replacement, and recruitment and training of staff will require substantial investment.
	Express doubt that decisions on future capital expenditure can be properly informed by auctions of long term entry capacity since shipper interests are variable according to current objectives. Argue that the time lag between investment and availability of additional capacity

	may distort the incentive to invest. Suggest that proposed capacity auctions should be replaced by previous system of pricing capacity at long run marginal cost.
	Supports further investigation into Transco's capital expenditure programme. Concerned whether or not the underspend will have consequences for the integrity of the system.
	Note that controls should encourage Transco to err on side of over investment.
	Express concern about apparent under-investment in NTS contributing to higher wholesale gas prices and attribute this to insufficient incentives on Transco to invest. Suggest that the continued shortages of capacity and higher wholesale prices are ultimately borne by the customer. Anticipate that IIP will reduce delays to investment. Wish to see an annual update and explanations on why planned maintenance has not been carried out. Express concern about lack of incentives on Transco to efficiently purchase meters and seek reassurance that Transco will bear any risk of non-compliance with Weights and Measures requirements in respect of imperial meters.
	Favour measures to ensure that Transco does not underinvest in NTS capacity (associated with wholesale price increases) in the early part of the price control period. Support formal requirements for capital expenditure monitoring in a special licence condition. Argue that severe penalties should apply for under-investment in NTS capacity.
	Believe that historical profile of capital expenditure reflects the incentive for regulated companies to under-invest under the RPI-X approach. Think that a scenario-based regime informed by industry input might overcome this but it is unclear why the particular scenarios presented by Transco were chosen and how flexible they might be. Wish to see further explanation of how scenario based regime will fit with incentives to invest in response to entry capacity auctions.
	Support the general approach in assessing capex and opex. Note Transco's capital underspend. Do not believe that the value of the regulated asset base should be reviewed and that price controls should be set on the basis of a consistent valuation of regulatory assets. Believe that the approach on financial issues should be consistent across the gas and electricity industries. In relation to NTS asset ownership activities, suggest similar approach as for NGC's transmission asset ownership activities should be adopted. Argue that in the case of LDZs, the approach should be consistent with electricity distribution companies.
	Believe that there should be no incentive in price control for Transco to delay capital expenditure. Suggest that given the uncertainties in expenditure for safety-related investment and capacity requirements, a revenue adjustment mechanism should be included in the price control so that it is clear how variations in spending requirements between 2002 and 2007 will be handled. Suggest that some cost savings may be lost as a result of "unbundling" the business and this needs to be reflected in the price control mechanism.
	Concern that the RPI-X approach has encouraged under-investment in the early part of the price control period and believe that the incentive structure should be aimed at better aligning investment with market demands.
	Agree that RPI-X should be applied to both NTS and LDZ activities over a five-year period. Express no preference for either focussed or unfocussed approach to RAV but doubt the validity of direct comparisons with NGC.
	Broadly in agreement with proposal for incentives to ensure economic and efficient delivery of mains replacement programme.
	Point to the apparent capital underspend and suggest that this may be due to inflated forecast of expenditure. Agree that a robust mechanism and regular monitoring is required to ensure that allowed revenue is appropriately committed to expenditure as intended by the regulator.
	Suggest that an analysis of planned and actual expenditure should be provided on an annual basis to enable adjustments to allowed revenues within the corresponding year. Believe this would provide incentive to manage cost annually.
	Disagree with some aspects of the definition of controllable operating costs used by the regulator and believe that the regulator's view of out-performance on controllable costs has been overstated accordingly.

	Disagree that transportation operating expenditure during the present price control period has been reducing at a greater rate than expected by MMC. Disagree that Transco is "forecasting a levelling off" in operating expenditure and argue that the reduction in opex between 2000 and 2006 is due to productivity improvements. Agree that there is an incentive for "reclassification of some costs as capital expenditure" but argue that the capital monitoring framework and audit process ensures that any reclassification is identified. State that all costs are categorised according to UK accounting standards and that Transco does not capitalise operating expenditure. State that it fully expects efficiently incurred capital expenditure to be included in the regulatory value as this is fundamental to Transco's ability to finance expenditure. Do not agree that the variance report between the price control forecast and actual expenditure provide an "insight into Transco's forecasting accuracy and investment practices" and outline supporting arguments. Do not support the suggestion that underspend due to windfall gains, forecasting inaccuracy or failure to meet expected outputs should be treated differently from efficiency gains as it is contrary to the concept of an incentive regulation and against customers' interests. Believe that any correction resulting from underspend would be likely to generate regulatory uncertainty in the sector leading to an increased cost of capital. Argue that Transco expects to deliver outputs consistent with those required or implied by the MMC and has thus met its obligations. Outperformance of financial projections through efficient delivery of outputs benefits shareholders during the price control period but can be passed on to customers when the price control is reviewed. Argue that, in any case, total investment expenditure will be the same as projected by MMC and therefore there is no case for correction in any case.
Financial Issues	Express concern about ongoing uncertainty in regulatory asset value (RAV). Suggest that, in reaching a decision on RAV, the regulator should recognise that- Shareholders and debt holders' investment in the different British Gas businesses since 1991 has been made on the basis of relative regulatory certainty and changing the RAV now would undermine that certainty. If the RAV were to be altered then investors would expect a higher return as a result of the increase in perceived risk of regulatory uncertainty, regardless of the return expected by investors ten years ago.
	Suggest that increased uncertainty and volatility as a result of regulatory intervention has reduced investor appetite for utility equities, in particular, uncertainty regarding Transco's focused/unfocused asset value and market perception that this uncertainty will continue. Argue that debt investors similarly affected: Bond investors, who perceive utilities as offering long term stability with low risk, may increasingly exit the sector in response to perceived instability and increased risk. Suggest that the risk of credit rating downgrades may be a further response to regulatory uncertainty resulting in lower demand and/or demand for higher yield. Note that the five-year review period is typically shorter than the maturity of bond issues, creating investor concern about ability to refinance following an intervening review. Suggest that debt and equity markets' focus in particular on the focused/unfocused debate on Regulatory Asset Value and on the re-assessment of cost of capital as issues of ongoing uncertainty. Believe that investors generally are becoming more aware of the potential impact of unbundling LDZs and separate LDZ price controls but too soon to gauge the effect on markets. Believe that possible separation of system operator role is not seen as a major issue, given perceived benefits of separation of roles in National Grid. Suggest that the potential impact of increased replacement expenditure on profitability once highlighted will become a significant issue for both debt and equity investors. State that reopening the debate on focused/unfocused asset value has further unsettled the markets. Disagreed that factors mentioned by the regulator support the conclusion that RAV should be adjusted. State that practical, long-term sustainability of Transco debt must be considered in determining cost of capital, not just theoretical cost. Predictable long-term investment requirements must be factored in to ensure stable funding costs. Assess Transco's weighted average cost of capital to be approximately 7% pre tax in medium term comprising cost of equity of 10.1% and cost of debt 4.5%.
	Believe that the introduction of auctions of long-term entry capacity will increase

	investor perception of risk and hence cost of capital. Oppose the proposal to reconsider regulatory asset value on basis that it would undermine basis of previous equity investment and increase uncertainty for investors. Argue that the effect would be to increase Transco's cost of capital and create a ripple effect on other utilities.
	Supports focused approach, as a methodology though believes that a retrospective approach may cause more problems than it solves.
	Believe that altering RAV would increase uncertainty and therefore risk, placing downward pressure on credit rating and increasing cost of capital. Argue that potential investors would require higher returns raising cost of equity, undermining price control limitations. Suggest that Transco may be discouraged from investing if unable to earn a sufficient return on assets. Note that re-valuation of initial RAV goes against MMC precedents and the regulator's previously published views. Believe it would also create a disincentive to unbundle the business in future by signalling that it intends to re-value Transco's regulated business downwards each time a part of the business is deregulated as result of competition. Argue that the retrospective use of regulation in this way greatly increases the risk to regulated businesses and increases the cost of capital. Believe that lowering the WACC from 7% to 6.25% or below would act as a constraint on ability to undertake the levels of capital and operating expenditure required in future.
	Suggest that consumers would welcome lower transportation costs resulting from a lower RAV but doubt that the regulator has any new evidence to support the case for lowering RAV.
	Favour an independent review of Transco's regulatory asset base.
	Believe that the use of BGs market value at 1991 for determining regulatory value of Transco needs to be reconsidered. In favour of valuing regulated assets at overall market value less the realisable value of for the UK gas supply business and exploration/production business.
	Suggest that RAV is the prime determinant of value to shareholders as it determines level of return. Argue that before making any retrospective change to RAV, regulator should consider - the effect on debt and equity investors willingness to invest in future; previous MMC rulings and investors expectations that current RAV would stand; difficulty in obtaining accurate estimate of the value of unregulated business (time elapsed, number and volatility of variables). Believe that any change to Transco RAV would result in a higher risk premium and higher cost of capital being applied by the investment community. Argue that the regulator should also consider the need for Transco to fund a large expenditure program and the effect of this on cost of capital.
	Note a lack of consistency between regulators in calculating cost of capital and believe a single methodology should be developed for use in all subsequent reviews. Also important that decisions on calculating RAV for regulated businesses within Transco will not be subject to future review.
	Believe the focussed approach would be more consistent with separate controls on the LDZs and NTS and has become easier since the further separation of Transco from BG's core activities. Believe it would also be more consistent with customers' interests. Agree that a cost of capital of between 5.5-6% is in line with other low risk investments but there is a danger that regulatory risk will significantly increase the cost of capital and this must be avoided.
	Argue that equity investors expect Transco will be able to fund its operating and capital requirements, earn a reasonable return and pay an appropriate dividend to investors. Express concern that a change in valuation methodology at this stage would indicate that regulatory precedent has little value, thus increasing the risk profile of Transco and other regulated companies.
	Express concern at the reopening of the debate on regulatory asset value. Believe that consistency with previous decisions is more important than consistency with other regulated industries. Believe that in determining the cost of capital, the regulator should take account of the need for funding for the substantial safety related investment required in mains replacement.
	Support the focussed approach to setting RAV as this is more likely to deliver lower prices and benefit end consumers. Believe that investors received a windfall gain as a result of the adoption of the unfocused approach and any change to a focussed

	approach should be regarded as correcting an anomaly rather than an "assault" on investors' interests.
	Believe that a cost of capital below the top of the 5.5 – 6.25% ranges is hard to justify in terms of either generic cost of capital methodology or risk analysis. Believe that it is unsafe to estimate a risk-free rate on the basis of margin over current yield since the gilt market is currently undergoing major structural change which is likely to raise the yield on longer term yields. Believe that since there is no reliable estimate of risk premium then it is incumbent on regulators to take a balanced view, as exemplified by the Competition Commission in recent price reviews. Suggest that Transco's forward looking risks are substantially higher than historic risks having regard to the proposed re-valuation of RAV and exposure to a variety of output performance measures. Suggest that because the Competition Commission has twice concluded in favour of the unfocused approach then the regulator should regard these determinations as final.
	Disagree that there should be a revaluation of RAV, the issue having been finally resolved by the MMC in favour of the unfocussed approach. Believe that any further revaluation undermines the value of Commission rulings, creating additional regulatory risk and consequentially increasing the cost of capital for regulated companies. Favour the use of straight-line depreciation rather than annuitised depreciation in the calculation of allowed revenue.
	Believe that the regulatory asset value is the most important factor in determining the cost of equity in the sector and therefore continuity in RAV is an essential part of long-term investment decisions. Believe that the unfocused approach to asset valuation (as applied by the MMC) should be maintained particularly as Transco will be required to finance substantial new investment during the next regulatory period.
	Broadly agree with the approach to assessing cost of capital. Suggest that in some areas, a more sympathetic approach may have been warranted but a tax wedge that is too high offsets this. Argue that the risk-free rate and equity risk premium are too low but that the tax wedge is unreasonably high. Suggest that overall a cost of capital in the range 6.0 to 6.5% is appropriate. Believe that it is appropriate to consider adopting the focused approach to setting the RAV and suggest that a market asset ratio could lie in the range 81 to 92% rather than the 61% assumed by the regulator. Believe that the matter must be determined finally to avoid any further uncertainty.
	Disagree with the proposal to re-assess the pre-1992 regulatory value as it causes regulatory risk and uncertainty, which in turn may have a detrimental effect on customers and the network.
	Believe that the regulator has materially underestimated Transco's cost of capital and note the following points: States that applying a single aggregate cost of capital could create an uneven playing field in either Transco's or competitors' favour. Argue that this could result in individual business not being able to finance their activities. Argue that an appropriate measure of Transco's gearing is at Transco Holdings level as at December 2000 since Transco Plc earnings wholly support this debt. Believes that a minimum investment rating is not consistent with Transco's efficient capital structure. Argue that, in determining the risk-free rate for the purpose of calculating a cost of equity, the fact that gilt yields are artificially low (due to the Minimum Funding Requirement) should be taken into account and yields adjusted upwards accordingly. Argue that certain research relied upon by the regulator to support an estimated equity risk premium of below 3.5% actually support an equity risk premium of around 4-5%. Argue that the way in which the regulator has determined a beta value is flawed in several respects and outline supporting arguments, notably, that it ignores the current regulatory risks resulting from the focus/unfocus debate. Believe that the Dividend Growth Model provides a useful check on equity risk premium and that, in addition, evidence such as Transco's Investor's survey should be taken into account when considering the cost of capital. Support the use of the mainstream corporation tax rate to derive a pre-tax cost of equity, provided that it produces the appropriate amount of cash to enable Transco to meet its actual tax liabilities.

	Argue that Transco's regulatory and business environment is more risky than NGC's and that its cost of capital is accordingly well above the range [of 5.5-6.25%] assumed for NGC. Oppose the revaluation of regulatory asset base at this stage and - Suggest that the real issue is how to treat the privatisation discount in valuing the regulated business. Note that the same discount to market value was applied across all of BG's assets as this gave the same result as a focused approach based on market valuation of the unregulated parts of the business. Argue that the only basis for reconsidering the issue would be if there was new evidence on market valuation of the unregulated business as at the end of 1991 and assert that there is no new evidence. Suggest that even if there were new evidence, there is no justification for changing RAV having regard to the undermining of regulatory consistency and the consequential increase in cost of capital. Argue that this will impact more generally on market sentiment towards all other regulated utilities. Argue against moving to annuity depreciation based on the impact on revenue (and consequentially prices charged to customers); the potential for "storing up" problems in respect of future network capacity and reliability; inconsistency with past regulatory practice; likelihood of changes to UK Accounting Standards to proscribe the use of annuity depreciation; and a reduction in revenue and negative impact on ability to finance. Argue that the use of single asset lives within the price control could also have an adverse effect on prices, intergenerational equity and the ability of the company to finance its activities. Argue that there are a number of respects in which the regulator's approach to financial modelling and financial indicators are flawed.

List of Respondents

Alliance Gas
Amerada Hess Ltd/Midlands Gas Ltd/Western Gas Ltd
Aquila Energy Limited
Association of Electricity Producers
BP Gas Marketing Ltd
British Gas Trading Ltd
Combined Heat & Power Association
Corus UK Ltd
Dynegy UK Ltd
Energy Savings Trust
energywatch
Enron Europe
Exoteric Gas Solutions Ltd
ExxonMobil International Limited/ Mobil Gas Marketing (UK) Ltd/ Esso Exploration & Production UK Ltd)
Health & Safety Executive
Innogy plc
JP Morgan
M&G Investment Management Ltd
Major Energy Users Council
Merrill Lynch Investment Managers Ltd
National Energy Action
Northern Electric plc
Powergen UK plc
Schroder Investment Management International Ltd
Schroder Salomon Smith Barney
Scottish & Southern Energy plc

Seeboard plc
Society of British Gas Industries
The Gas Industry Safety Group
The National Grid Co plc
Transco plc
TXU Europe Group plc
United Utilities plc

Appendix 2 Summary of Seminar held at the British Library on 5 April 2001

1. Introduction

Following publication of the February 2000 initial thoughts paper, Ofgem held a public seminar on 5 April to discuss and invite views on key issues outlined in the paper.

The speakers were:

- Chairman, Richard Ramsay, Managing Director of Regulation and Financial Affairs, Ofgem
- Justin Coombs, Director of Transportation Regulation, Ofgem
- Colin Sausman, Head of Metering Analysis, Ofgem
- Steve Smith, Director of Trading Arrangements, Ofgem
- Chris Bolt, Director of Regulation and Corporate Affairs, Transco.

2. Opening

Richard Ramsay opened the presentation by giving an overview of the process to date and an outline of the planned work and process going forward. Richard discussed the roles carried out by Transco and noted that the largest element of allowed revenues was for the LDZs, followed by the NTS, metering and meter reading.

3. Form and scope of LDZ control

Ofgem presentation

Ofgem noted that Transco is currently subject to an overall RPI-X control. Ofgem proposes to retain this for the LDZs but with improved links between revenues and output measures. Respondents to Ofgem's November document broadly supported separate controls for the NTS and a single control for the LDZs (in aggregate), but recognised potential benefits from separate LDZ controls.

Ofgem noted that, provided its price control proposals are agreed with Transco, it intends to consult later in 2001 on the issue of individual LDZ controls. It also noted that separate LDZ controls may provide better information for the setting of price controls. Against these benefits, there are issues that need to be addressed, including regional variations in pricing.

Discussion

A delegate asked if Ofgem had concerns about the effect of separate LDZ controls on regional pricing. Ofgem stated that NTS exit charges already cause some regional differences, which feed into customers' charges. However, separate LDZ controls may lead to more significant regional differences.

A delegate supported a single control for the LDZs. He felt that Transco had not made a strong enough case for separate LDZ controls. He noted that BG had achieved inter-regional competition within a single company. Best practice should be shared but this does not necessarily need to be part of a price control. If Transco want to sell off an LDZ it should be addressed outside of the price control review.

A delegate felt that if information collection did not begin soon Transco and Ofgem would have imperfect information to base any decisions on separation of the LDZs.

A delegate asked how internal LDZ line-pack would be handled. Ofgem stated that this had not been specifically addressed although it falls within the overall expenditure monitoring proposals.

4. Metering and meter reading

Ofgem presentation

Ofgem explained that metering competition has not yet developed in all areas and that price controls for some services will be necessary post 2002. Ofgem noted that although the regulatory value had been apportioned between transportation, metering and meter reading when separate price controls were developed last year, it was not clear that this apportionment was appropriate going forward and would be looked at again in the price control review.

Ofgem expected to propose an initial two-year price control for key services based on a tariff basket approach.

Discussion

A delegate asked about the impact of hourly balancing and the need for new systems, as this was not addressed in the price control paper. He asked how hourly metering services would be made available. Ofgem said that this may be made available as a new service in the competitive market but welcomed views on this topic. The delegate felt that it should be a basic service provided by Transco.

A delegate felt that removal of metering controls in the future was a fait accompli. The delegate asked what evidence Ofgem will look for to show that metering is competitive. Ofgem said that the specific tests had not yet been defined. The market would be reviewed, probably using similar tests to those used for the supply market. If the market was found not to be competitive it is likely that Ofgem would continue with price controls. Ofgem added that it was keen to encourage competition wherever possible and to remove the need for regulation.

A delegate noted that the regulatory value of meters was not specifically addressed in the focussed/unfocussed debate. Ofgem said that the regulatory value of the metering business must take into account the initial overall regulatory value. The delegate asked if this matter would be re-visited later. Ofgem stated that this would be revisited if the wider debate concluded that the overall regulatory value of Transco was shown to be inappropriate.

There was a discussion about applying a focused or unfocused view to the allocation of regulatory value between different price control blocks. Ofgem noted that there may not be sufficient information to apply a particular approach to this allocation and Ofgem may therefore need to use an alternative approach.

5. LDZ and shipper service output measures and standards of performance

Ofgem presentation

Ofgem explained that it is developing output measures and service standards with the aim of:

- providing Transco with appropriate incentives to improve its quality of service;

- provide appropriate compensation to customers where it fails to deliver;
- collecting better information on Transco's performance between reviews; and
- ensuring that Transco does not focus on short-term performance at the expense of medium-term performance.

The key issue is to define appropriate standards of performance and a number of key output measures.

Ofgem has proposed monitoring Transco's safety performance but does not intend to introduce output-based financial incentives related to safety, as safety is primarily the responsibility of the HSE.

Ofgem is looking at existing voluntary standards and considering whether these should be converted into regulatory standards of performance. It is also considering introducing several new standards of performance.

Ofgem has commissioned market research to assess customers' views of standards and levels of compensation. Ofgem proposes to publish the market research results in July, issue final proposals in September and start implementation of the outputs regime and standards of performance in April 2002. Reporting on output measures where Transco does not have reporting systems in place will be delayed until April 2003. The incentive scheme will commence in April 2004.

Discussion

A delegate questioned whether Transco had a view on the potential to reduce interruptions. Ofgem gave an example of Transco reducing the time taken to repair interruptions by employing more service engineers. Transco agreed with this adding that Transco has analysed the information available and has already highlighted action to reduce interruptions, for example by working more closely with certain third parties to reduce actions likely to cause damage to Transco's equipment. Transco is not only developing new ways of dealing with issues that cause interruption but also reviewing the mechanisms that operate once an interruption has been reported.

A delegate noted that the measurement of outputs relies on Transco reporting information accurately and that definitions need to be clear. Ofgem stated that parallel issues exist in the Information and Incentives Project for electricity distribution businesses where an auditing process has already been defined. The June paper will include details of proposed output measures and the draft regulatory reporting framework. Ofgem said that these outputs must cover things that can be measured. The cost of the processes needed to introduce new output measures would need to be taken into account.

A delegate noted that consumers' views may change during the price control period. Ofgem replied that although monitoring would take place on an ongoing basis it was Ofgem's intention to set measures that would not change over the period. Transco needs certainty and clear objectives. Outputs may be revised following the next price control review.

Transco asked Ofgem to clarify the symmetry of the incentive scheme. Ofgem responded saying that the symmetry depended on where the base line price control revenue was set. If Transco had read the proposed scheme as being asymmetical then they had misunderstood it.

A delegate supported the introduction of output measures but felt that incentives should be left to other mechanisms (for example, the Network Code where compensation can be focused on those affected rather than smeared amongst all customers). Ofgem said that guaranteed standards could provide targeted compensation and that the purpose of the price control measures was to incentivise Transco as a whole.

A delegate pointed out that some customers suffered from persistent low pressure and suggested that this could be used as another measure. Ofgem felt that measures should be visible to customers and that low pressure may not be visible. The delegate felt that low pressure could be a good measure of medium term performance.

A delegate was not convinced that numbers of interruptions was a good output measure as the numbers were relatively small. Ofgem agreed that the number was much smaller than for electricity, however there are still over 1 million per year in total and this is not an insignificant number. Domestic customers expect a reliable supply and this is a good measure of that.

A delegate asked who should pay if Transco performed well. Would this mean that allowed revenues would be higher than those needed for an efficiently run company? Ofgem responded that it might be appropriate for Transco to get more than the baseline revenues if it performed well.

A delegate asked about future output measures and suggested that putting revenues at risk increases the perception of risk and affects the cost of capital. The delegate asked if this is efficient for transportation. Ofgem said that once the price control is set, it does not expect to introduce additional measures during the next price control period. The proposed measures do not introduce a step change in revenues as only a small proportion of revenues would be at risk and Transco may have the opportunity to increase revenues. Ofgem noted that it did not consider that there would be a significant impact on the cost of capital but would welcome views on this.

A delegate stated that customers want to see price stability and certainty on tariffs. They do not want to see changes as Transco's performance varies. A delegate requested that Ofgem take into account the resulting volatility of charges. Ofgem recognised that volatility was an issue and noted that Transco has some ability to smooth charges over a period.

There was a discussion about the disaggregation of interruption measures. Ofgem suggested that interruptions would be recorded by customer and LDZ. More work is needed to look at monitoring individual pressure tiers.

A delegate stated that it is important to have a history of potential output measures and to look at trends. The delegate felt that only existing standards should be used. A delegate noted that industrial and commercial customers will have their own service level agreements with Transco. The delegate asked what is envisaged in this area. Ofgem said that these customers are able to negotiate with suppliers and may have less need of standards than domestic customers do.

Ofgem stated that it intends to develop expenditure monitoring beyond the current capital monitoring framework to cover operating costs as well as capital costs.

Ofgem asked for suggestions for new standards.

6. Efficiency and financial issues

Ofgem presentation

Ofgem explained that it has commissioned consultants to review the efficiency of Transco. Ofgem and its advisors are currently examining the appropriate allocation of costs and levels of efficiency. Initial conclusions will be issued in June.

Ofgem summarised Transco's capital and operating cost performance since 1997, and also Transco's projections to 2007. Ofgem noted that two important factors may affect these projections; the level of mains and services replacement work required by the HSE and the pattern of supplies at NTS entry terminals.

Ofgem is assessing the efficient cost of capital. For NGC Ofgem assumed a pre-tax weighted average cost of capital of 6.25 per cent which was the top of a range of 5.5 to to 6.25 per cent used in the draft proposals. Ofgem will consider movements in the financial markets and factors specific to Transco. The risk-free return in financial markets continues to be below historic rates and Ofgem considers that Transco may have similar business risk characteristics to NGC.

Ofgem is reviewing the appropriate method for setting a regulatory value for Transco (focused or unfocused). This has a significant impact on consumers. At the end of the last price control review Ofgas said it would revisit this issue in the 2002 review. Ofgem intends that this issue should be closed once and for all as a result of the current review in order to provide Transco with more certainty. Once the appropriate regulatory value has been determined it will be apportioned between the NTS, LDZs and Transco's other regulated businesses.

Discussion

A delegate asked if a focused assessment of regulatory value would necessarily lead to a lower value. Ofgem stated that all the evidence that it had seen so far suggested this to be the case although this is not an assumption.

A delegate asked what new evidence had been uncovered that was not available to the MMC and previous reviews. Ofgem noted that it is looking at new evidence due to the de-merger of different businesses post-1991. It may or may not be appropriate to take this into account.

A delegate asked whether depreciation was the same in both cases and also queried the appropriateness of NGC's financial ratios for Transco. Ofgem explained that under previous price controls Transco had been allowed depreciation based on the higher regulatory value. It was for consideration whether forward looking depreciation might be adjusted if a focused valuation was adopted. On the use of ratios, Ofgem questioned why Transco should be any different to NGC, and explained that it will discuss financial ratios with external bodies (for example, credit rating agencies) and take their views into account.

Transco raised the issue of taking into account investors' views. Ofgem stated that the published consultation documents invited views from all stakeholders and responses are taken into account. Transco suggested that many investors tend to be passive and do not respond to consultations. Transco asked if Ofgem planned to discuss the issues directly with major investors. Transco felt that the process was somewhat passive for a key set of issues and that Ofgem should consider talking to these investors. Ofgem noted that it has received responses from a number of investors and their advisers during this review.

A delegate asked if the regulatory value would be set for 5 years or will it be reopened for separate price controls for individual LDZs. Ofgem explained that it wants the debate on focused / unfocused closed at this review. If separate price controls are established in the future then this will be based on apportionment of the pre-determined total regulatory value.

A delegate felt that NGC would be an inappropriate comparitor if the businesses were disaggregated. Ofgem said that Transco raises capital at group level not at the LDZ level and that individual controls do not change this. It is appropriate to look at the cost of capital for the company raising the funds.

A delegate asked about the future regulatory value giving the example that if metering was sold at a very high value this could leave transportation with a very low value. Ofgem said that this was not the case. The regulatory value of metering would be set as a part of this review and would not be reopened if there were a change of ownership.

A number of delegates asked about replacement expenditure and whether it would be charged on a pay as you go basis. One asked if there is the prospect of moving towards a similar situation to the water companies where operating and capital costs and efficiencies are locked in for 5-years. Ofgem said that the key to understanding the financial impact of this expenditure was the workload requirements which are currently under review by the HSE.

Ofgem noted that it has a duty to ensure that Transco finance its activities. Financial modeling is used to check this. Ofgem looks at the glide path for the introduction of operating and capital cost efficiencies but has not yet reached a conclusion on this matter.

A delegate asked whether Transco's business was becoming more risky. Ofgem argued that its proposals were designed to have the opposite effect.

A delegate noted the scope of the proposed SO control and asked how this will be factored into the price control. Ofgem explained that currently SO costs that are external are subject to a cap-and-collar incentive regime, and those internal to Transco are subject to price control. In future it is intended that they are grouped, with Transco given incentives to minimize overall SO costs.

7. NTS output measures

Presentation

Ofgem explained that output measures will be set for NTS entry, exit capacity and linepack and these will be consulted upon as part of the price control review. The NTS entry/exit/ linepack capacity requirements will be determined for the price control period under four different supply/demand scenarios. Transco will need to complete a series of supply/demand matrices which will then be consulted upon and form baseline measures. The initial output levels will be set through the improved BPA Process.

Transco are to publish unit costs of incremental investment for each terminal. Emerging market signals will determine Transco's investment over the price control. Transco will have improved incentives to invest sufficiently to meet customers needs and to respond to price signals emerging from capacity markets. Transco will also have incentives to invest above the initial level of output capacity and will retain the revenue associated with incremental capacity sales during the existing price control period. Transco will also have any incremental investment undertaken in response to market signals included in the regulatory value at the subsequent price control review. Transco will provide additional capacity if the market prices are at or above the costs of incremental investment.

Transco will face stronger financial incentives to provide agreed outputs when it is efficient to do so and will be exposed to liabilities associated with not making output capacity available. Transco will be allowed to develop new tools to manage the risks of capacity buy-backs and will not face the risk of a regulatory claw-back of capital expenditure. Transco will buy-back any incremental capacity that it has sold but cannot make available.

Discussion

One concern with the proposals was that capacity buy-backs and associated costs might arguably be higher with the top-down approach. Ofgem explained that the risks would be mitigated by allowing Transco to enter into option and forward contracts. Transco would plan its maintenance and investment in projects efficiently in response to price and market signals as a financial commitment to pay is better evidence of "reasonable demand" than signals from the BPA.

A delegate asked whether Transco would have any incentive to contract ahead at the end of the price control period. Ofgem said that signals will show the need for investment and this investment will go into the regulatory value thus giving Transco incentives to invest. The duration of contracts may run for more than 5 years.

A delegate said that flexibility and headroom in NTS expenditure was desirable. The delegate felt that there was a need to expand at St. Fergus, as it was unrealistic for all new gas to be assumed to come into Bacton. Ofgem noted that shippers and suppliers requiring flexibility of gas sourcing may be willing to pay for it, and Transco could then invest accordingly. For example, on the need to expand at St. Fergus, the market was better placed to provide signals than Ofgem.

There was a discussion on the role of the SO and TO. A delegate felt that there could be a conflict between them. Ofgem suggested that it was the role of the TO to provide long term capacity by investing in appropriate assets. The role of the SO was to make best use of whatever capacity was available, including the use of market mechanisms.

A delegate asked if Transco would be given a choice of whether an investment is added to the regulatory value or remains outside of the price control and would Transco be able to recover its funds via a market mechanism? Ofgem said that this could not be totally ruled out. Ofgem has no firm views and would be open to discussion bearing in mind Ofgem's statutory duties.

A delegate asked what would happen if Transco invested money that Ofgem did not consider appropriate and would it rest outside the regulated business. A delegate suggested that this would increase the perception of risk. What would happen if Transco invested on the basis of auction signals and then found that prices fell once capacity had been built? Ofgem said that once a decision to include an investment in the regulatory value had been taken it would remain there.

A delegate asked what would happen if the SO and TO were separately owned in future. Would Ofgem scrutinise the contract between them? Ofgem felt that this would be unnecessary if the incentives were right. Ofgem was open-minded but against prescription.

A delegate asked about the process for output measures needed beyond the next price control period. Ofgem said that it expected Transco to formulate forward looking business plans, looking beyond 2007.

A delegate welcomed the long-term process. For larger consumers the price of gas transportation is low compared to gas costs. The delegate was concerned about the high level of costs from the St. Fergus auctions and asked how Ofgem will decide on NTS measures. Ofgem said that these would be developed via consultation and discussion with suppliers, shippers and others. Whilst auctions may signal a need for change, there are always uncertainties in forecasting supply and demand and there is no guarantee that forecasts will be correct.

A delegate asked what would happen if Transco ignored incentives. Ofgem explained that in this case it is unlikely that Transco would be meeting its obligations. Ofgem expects Transco to respond to signals appropriately.

8. Transco's response

Transco noted that it had made an initial response to Ofgem's paper which was available on Transco's web site. Transco would be presenting a strategic business plan to Ofgem setting out plans for the next price control period.

Transco felt that it was important to be clear about Ofgem's view of competition in metering and welcomed Ofgem's objective to lift metering controls.

Transco agreed generally with the focus on output measures but felt that security and flexibility needed to be addressed. Transco did not see how Ofgem's proposals would deliver what the network needed. HSE policy on mains replacement work has a major impact on resources (both manpower and financial) that needed to be addressed in the review.

Transco believed that there is an increase in business risk due to the whole package of proposals.

Transco stated that there is a need for financial stability and certainty of how investment will be treated going forward. Transco believes that uncertainty of supply and demand influences the cost of capital and does not believe that NGC is similar. The Competition Commission has set the cost of capital for similar businesses at over 7%. Transco believes that maintaining a single A grade investment rating leads to the lowest overall cost of capital. Transco does not wish to see this rating reduced.

Transco said that the regulatory value is a big issue, and that the current debate on this is impeding Transco in delivering its investments. Transco has seen no new evidence on the focused/unfocused issue since the MMC inquiry and believes that leaving the debate open is unnecessarily creating regulatory risk.

Transco noted that there is a mismatch between the treatment of replacement expenditure in the price control calculations and the treatment in its accounts. Transco has had discussions with the HSE on the possible size of the future replacement programme and believes that the accounting treatment of this expenditure in the price control will need to be reviewed.

Transco highlighted that the revenue from pipeline investment is accrued over thirty years, not five. The use of auctions is moving Transco away from being a common carrier towards contractual arrangements. Transco sees major issues for NTS investment and security of supply. Transco believes that its customers want more flexibility. Transco wants to see a more incremental approach and retain the BPA process, but with improved transparency and the ability to adjust investment annually.

Conditions were not yet established to support Ofgem's proposed exit regime. Transco did not believe that Ofgem's proposed framework meets the needs of shippers and consumers.

Appendix 3 Regulatory framework

The Gas Act 1986

The Gas Act 1986 (The Gas Act), as amended most recently by the Utilities Act 2000 provides for the regulation of the onshore gas arrangements in Great Britain and for the separate licensing of Gas Transporters (also referred to as GTs in relation to licences and previously referred to as PGTs, as explained below), gas shippers and gas suppliers. Transco is the largest Gas Transporter in Great Britain. The Gas Act also provides for the creation of the Gas and Electricity Markets Authority (the Authority).

The objective and duties of the Authority are set out in sections 4A, 4AA and 4AB of the Gas Act. The principal objective of the Authority in carrying out its functions under the Gas Act is to protect the interests of consumers in relation to gas conveyed through pipes, wherever appropriate by promoting effective competition between those engaged in or in commercial activities connected with the shipping, transportation or supply of gas, conveyed through pipes.

The Utilities Act 2000

The Utilities Act 2000 (the Utilities Act) amends the Gas Act in a number of significant ways. The Utilities Act gives the Authority (which replaces the Director General of Gas Supply) new duties as outlined above and functions in relation to licensing and setting performance standards. The Utilities Act will also amend the Gas Act so as to give the Authority the power to impose financial penalties on companies found to be breaching, or to have been in breach of, licences issued to them under the Gas Act or the Electricity Act 1989. Gas Transporters will also have some additional duties placed on them. The Utilities Act was given Royal Assent in July 2000 and large parts of the Act have been brought into force. It is expected that the remaining parts of the Utilities Act (such as the provisions relating to financial penalties) will be brought into force later this year.

Section 76 of the Utilities Act amends the Gas Act so that the term “Public Gas Transporter” will become simply “Gas Transporter”. Section 76 has not yet been commenced but in anticipation of its commencement, throughout this document reference is made to Gas Transporters.

Competition legislation

The Authority has concurrent powers with the Director General of Fair Trading under the Fair Trading Act 1973 and the Competition Act 1998.

The Competition Act 1998

The Competition Act 1998 (the Competition Act) prohibits anti-competitive agreements (the Chapter I prohibition) and abuse of a dominant position (the Chapter II prohibition). Under the Competition Act, the OFT enforces the Chapter I and II prohibitions. Under the Gas Act, the Authority has concurrent powers with the OFT to enforce the Chapter I and II prohibitions. Chapter I prohibits agreements between undertakings, decisions by associations of undertakings or concerted parties which have the object or effect of preventing, restricting or distorting competition in the United Kingdom and which may affect trade in the United Kingdom. Chapter II prohibits conduct by one or more undertakings, which amounts to the abuse of a dominant position in a market in the United Kingdom, which may affect trade in the

United Kingdom. Under the Competition Act the Authority has the power to impose financial penalties of up to 10 per cent of turnover on companies infringing the prohibitions of the Act.

Fair Trading Act 1973

At the request of the Director General of Fair Trading, the Authority must exercise functions under Part III of the Fair Trading Act 1973 in relation to conduct which is, or may be, detrimental to the interests of consumers of gas conveyed through pipes. Part III of the Fair Trading Act 1973 allows the Authority to obtain written assurances from a person carrying on a business for that person to refrain from conduct which is detrimental to the interests of consumers in the United Kingdom or conduct which could, in accordance with the Act, be regarded as unfair to consumers.

The Health and Safety Executive (HSE)

The Health and Safety at Work etc Act 1974, together with subordinate legislation in the form of Regulations, provides a regulatory framework for health and safety related issues arising from work activities in Great Britain. Contravention of certain provisions of health and safety law can result in criminal prosecution.

The enforcing authority for the gas industry under the Health and Safety at Work Act is the Health and Safety Executive (HSE), which comprises a number of policy and operational inspectorates. The HSE has inspectors who are responsible for policing health and safety law.

There is a range of enforcement powers available to HSE inspectors including the power to issue improvement and/or prohibition notices and bring prosecutions. Prosecutions for alleged breaches of health and safety legislation take place in the criminal courts and, where a conviction is obtained, the court may impose a range of penalties, including fines and imprisonment.

The HSE has responsibility for developing new health and safety law and revising and reviewing existing legislation, a process that involves extensive external consultation.

Gas Safety (Management) Regulations

The Gas Safety (Management) Regulations 1996, SI1996 No 551(GS(M)R), set out certain safety requirements with which GTs must comply or cooperate with. All gas conveyors, including holders of a GT Licence, must produce a safety case and have it accepted by the HSE, before they can convey gas. Transco currently undertakes the role of the Network Emergency Co-ordinator (NEC). Material changes to any safety case need to be accepted by the HSE before the change can be implemented.

Regulation of the offshore regime

Offshore sectoral regulation is the responsibility of the Oil and Gas Directorate of the Department of Trade and Industry (DTI). The DTI aims to maximise the economic benefits to the nation from the exploitation of its hydrocarbon resources, having due regard to the potential impact of such activities on the environment and on other land and sea users. It takes account of the need to ensure secure, diverse and sustainable supplies of energy for business and consumers at competitive prices. It liaises with the industry and other interested bodies to improve cost effectiveness and heighten awareness of environmental issues. It is currently consulting on the effectiveness of the industry Code of Practice on third party access to infrastructure, whether tariffs are barriers to exploration and development of new fields, and on publication of guiding principles on the Secretary of State's powers to settle access disputes on request.

The Petroleum Act 1998, which consolidated a number of provisions previously contained in five separate pieces of primary legislation (including the Petroleum (Production) Act 1934), vests ownership of oil and gas within Great Britain and its territorial sea in the Crown and gives the Government rights to grant licences to explore for and exploit these resources and those on the UK Continental Shelf (UKCS). The Oil and Gas Directorate's Licensing, Exploration and Development Branch manages the licensing process. It issues exploration and production licences, approves operators and issues field determinations.

The OFT has jurisdiction under the Competition Act 1998 throughout the UK and in respect of all sectors of the economy. This includes the offshore oil and gas industry. The OFT also has jurisdiction under the Fair Trading Act 1973 to make a monopoly reference to the Competition Commission. The OFT has a general duty under the Fair Trading Act to keep markets for the supply of goods and services to consumers in the UK under review.

Financial Services Market Act 2000 (FSMA) and the FSA's code of market conduct

The Financial Services Authority (FSA) is currently a non-statutory independent body established to regulate financial services and protect consumers. The Financial Services Market Act (the FSMA) will replace the Financial Services Act 1986 and is expected to commence later this year. Under the FSMA, the FSA will become a corporate body. The FSA will have four objectives under the FSMA: maintaining market confidence; promoting public understanding of the financial system; the protection of consumers; and fighting financial crime.

This overhaul of financial service regulation is taking place against a backdrop of fundamental change in the wholesale energy markets. The new regime relating to market abuse will apply to the behaviour of all legal persons in relation to qualifying investments traded on 'prescribed markets', regardless of whether they require FSA authorisation. The FSMA contains a regime dealing with market abuse that may extend to markets such as the OCM and trading upon such markets. The penalties for market abuse range from unlimited fines to censure. Individuals and companies are subject to the regime.

Appendix 4 Assessing competition in metering services

Background

Under the Utilities Act 2000, Ofgem has a single principal objective to "protect the interests of consumers…, wherever appropriate by promoting effective competition". A corollary of this objective is that explicit regulation can be removed when effective competition is established. In the context of Transco's metering and meter reading services, regulation relates to Transco's licence obligation to provide metering services, and to controls on its level of charges for these services.

This Appendix sets out the criteria Ofgem has used, and will use in the future, to assess the effectiveness of competition – and therefore the extent to which remaining regulation can be removed or reduced.

Approach to assessing competition

Effective competition is characterised by more than just the absence of a statutory monopoly. It requires that buyers of metering and meter reading services are aware of competing alternatives available to them, and are able to move their custom from Transco to other competing service providers easily and without disproportionate cost.

If buyers of metering and meter reading services can exercise choice in this manner, then over time competition can be expected to lead to innovation – since successful innovation will be properly rewarded – and to improved economic efficiency.

The assessment of competition requires a judgement on the degree to which there is informed choice over a range of competing offers. As the development of competition is a dynamic process, characterised by constantly changing structures, behaviour and performance, the development of competition cannot be measured against a simple set of indicators (such as market shares).
It is important to consider the functioning of metering and meter reading services markets in their entirety, which depends upon the combined effects of the actions of the incumbents, competitors and buyers of metering and meter reading services, as well as upon the structural conditions in which they all operate.

Ofgem therefore uses a range of indicators to assess the state of competition in metering and meter reading services. These include:

- market entry and exit;
- volumes and prices of incumbents and market entrants;
- the behaviour of incumbents;
- awareness about the possibility of switching service provider;
- switching behaviour – and factors constraining the ability to switch;
- the number and range of price and service levels offered;
- product and service innovation; and
- perceived barriers to entry or to switching behaviour by current or potential market participants.

This approach, using a range of indicators as appropriate, is consistent with the approach used in assessing competition in gas and electricity supply.

It is Ofgem's view that a significant factor in the first instance for competition in metering services is the ability of buyers of metering services (shippers and suppliers) to move their custom away from Transco. There are two underlying issues. First, the current absence of agreed automated processes and data-flows to facilitate the use of non-Transco meter providers, in the context of the ability of customers to change supplier. Second, the extent to which shippers' investment in IT changes to support the continuing use of Transco as a meter provider constrains, commercially, their subsequent ability to appoint a new meter provider.

A significant amount of progress has already been made by the industry through the Review of Gas Metering Arrangements (RGMA) project to address the first of these issues. Ofgem will monitor the operation of these processes in practice to ensure that they are sufficiently robust – and do not act to deter shippers from seeking alternative offers.

The second issue, the extent to which shippers are constrained by the investment required to continue to use Transco as a meter operator, is an example of a more general class of factors to be considered - the degree to which competition is constrained by the actions of Transco, the incumbent service provider.

It is understandable that an incumbent will respond to competition in a number of ways. Even when the incumbent is dominant, some responses will be in line with the general cut and thrust of everyday business (under competition law, dominant firms are not prohibited from competing – the prohibition relates to the abuse of dominance). However, some responses may amount to the abuse of market power, since they may have the effect of pre-empting or forestalling the development of competition.

To the extent that the incumbent maintains substantial market power, regulatory controls may be required to limit the range of moves open to the incumbent when responding to the development of competition, although whether such controls should extend beyond those associated with standard competition law will depend upon the extent and the nature of the market power concerned, as well as the prevailing market conditions.

Appendix 5 NTS output measure matrices and assumptions

Ofgem has asked that Transco complete the following output measure matrices under three different scenarios outlined in Transco's Ten-Year Statement. In addition, Ofgem has requested that Transco consider an additional scenario consistent with that adopted during the NGC price control review. The latter is based on an increase in gas-fired electricity generation with installed capacity of 5 GW, distributed across the National Grid.

The matrices as completed by Transco can be viewed on its website (www.transco.uk.com).

The three scenarios from the 2000 Ten-year statement are:

Demand Supply	**Baseline**	**Strong**
Interconnector Balance	C	A
St Fergus Expansion	Not Considered	B

A. Strong Demand & Interconnector Balance
B. Strong Demand & St. Fergus Expansion
C. Baseline Demand & Interconnector Balance

Demand Cases

Baseline Demand

This case assumes that a period of recession will occur which has the net effect of causing a decline in the rate of growth in demand for gas, both in the domestic and non-domestic sectors. The other significant general assumptions that influence this case are:

- increased efficiency as various sectors replace existing equipment/appliances; and
- greater sectoral shift from manufacturing to services, driving down total consumption in the non-domestic sector.

The other specific assumptions are:

- greater penetration of renewables into the Combined Heat and Power (CHP) market reduces the number of new gas-fired CHP demands;
- despite the removal of the Stricter Consents Policy there will not be a significant increase in gas fired plant;
- the Corrib field off the west coast of Ireland is developed and substitutes for part of the gas exported from the UK; and
- Shearwater Elgin Area Line (SEAL) gas is exported via the European Interconnector, by-passing the NTS entirely.

Strong Demand

This case envisages strong growth in all sectors with prospects for the British economy remaining favourable over the medium term, based on steady economic growth and low inflation. Gas remains highly competitive in price terms, with:

- non-domestic growth continuing, with strong generic growth and CHP growth;
- continued growth in the power generation sector, with gas's share of generation increasing from 40% to 50%;
- exports to Ireland and Europe growing, but with SEAL by-pass to the European Interconnector; and
- domestic sector growth coming from new connections, with a significant impact from the Affordable Warmth programme. Continuation of the current stable level of average domestic consumption and the assumption that insulation and efficiency gains will be offset by an increased "comfort factor".

Supply cases

St.Fergus Expansion

The greatest impact that can reasonably be anticipated is that all future discoveries of new gas supplies will be landed at St. Fergus.

Interconnector Balance

This case assumes that the supply deficit is met by a combination of limited additional supplies at all terminals, with the European Interconnector providing increased flexibility to provide a match. The European Interconnector is emerging as a swing provider.

Appendix 6 Payments to customers suffering loss of gas supply due to third party damage to Transco's network

Summary of understanding (draft)

Following discussions between Ofgem, Transco and customer groups, Ofgem and Transco have reached an understanding regarding the application of standards of performance provisions to customers who lose their gas supply due to incidents involving third party damage to Transco's network of pipes. This includes incidents where there is water ingress to the gas network resulting from a failure or damage to a water company's apparatus. The following sets out the current proposals.

1. Ofgem will shortly be introducing statutory instruments and determinations setting out the Guaranteed and Overall Standards which Transco will be required to meet and to report on from April 2002 in respect of customers. Some of these standards relate to the actions to be taken by Transco in the event of an interruption to a customer's supply of gas including the making of standard payments to domestic customers where interruptions last longer than 24 hours and the provision of alternative heating and cooking facilities.

2. Under the provisions currently in place Transco does not make payments to customers where it considers the incident leading to loss of supply is a "force majeure" incident. However, in such circumstances Transco has generally made available on loan alternative heating and cooking appliances in line with the proposed standards. Transco considers that such incidents include third party interference to its network of pipelines and water ingress arising from water egress from a water company's apparatus.

3. It is the intention of both Ofgem and Transco that this "force majeure" exclusion from the standards of performance obligations of Transco will not apply from April 2002 except if the circumstances set out in item 12 below apply.

4. The arrangements for industrial and commercial (I&C) customers will continue to be covered in the Network Code and both Transco and Ofgem agree that amendments should be tabled and progressed to bring Transco's obligations in respect of reconnection of I&C customers who are off supply in line with those proposed for domestic customers, although there may be differences in the levels of payment according to the Network Code provisions.

5. These proposals have been discussed with shipper groups and energywatch and there is agreement that these proposals should be taken forward. Ofwat have also made clear to water companies that it considers that they should cooperate with these arrangements.

6. Transco has discussed with Ofgem the most efficient manner of providing for the potential costs of removing the force majeure provision and is proposing to take out insurance cover to meet the large liability payments under these new obligations. This cover will include clauses relating to an excess and liability caps. The details are still being evaluated but are likely to include an excess (currently £50,000 is proposed) and a single incident cap of £10 million and an annual cap of £50 million - £100 million.

7. The additional costs to Transco are the insurance premium and the cost of the payments to customers within the excess. Further work is being carried out by Transco to establish the costs.

8. Ofgem has agreed to include an appropriate revenue allowance against these cost liabilities under the LDZ price control to be set from April 2002.

9. Each year Transco will collect appropriately detailed information on each incident that occurs, including information on Transco's performance in restoring gas supplies to customers, and provide a report annually detailing each incident, an aggregate summary of the incidents in the year, and details of the payments made to customers.

10. Transco will demonstrate each year to Ofgem the level of cost attributed to payments resulting from third party interference and water ingress incidents and that the costs have been incurred efficiently. If Transco wishes to provide for these costs through taking out of an insurance policy, Transco must supply to Ofgem details of the scope of the insurance procured and the level of premia and demonstrate that these are efficient.

11. It is noted that Transco may be able to recover certain costs from the party which has caused the damage. The revenue allowed by Ofgem is related only to standard of service payments on the basis that these costs are payable by Transco.

12. Transco would not be required to make payments to customers in any single incident where more than 50,000 customers have their supply interrupted.

13. After an incident has occurred, Transco will seek to reconnect customers with the same level of efficiency and timeliness regardless of the cause of the incident.

14. Transco will assume the responsibility for coordinating the reconnection of all customers affected by an incident, including liaison with water companies and other relevant companies and agencies and, subject to 15 below, will procure and deploy CORGI registered contractors for work downstream of a customer's meter. The HSE is considering introducing related amendments to the Gas Safety Management Regulations.

15. In the case of individual premises where water ingress to Transco's network has resulted in water entering the gas pipework downstream of the customer's meter, the relevant water company shall contract with CORGI registered contractors, but Transco will retain the obligation to coordinate all remedial works in an efficient and timely fashion. In these circumstances, water companies will need to have regard to Section 209 of the Water Industry Act 1991.

    Transco agrees to implement these arrangements on 1 September 2001, prior to their formal introduction on 1 April 2002.

16. Ofgem has proposed that costs incurred by Transco on an insurance based scheme prior to April 2002 will be allowed in setting the next price control. In order to effect the insurance quickly for the period to 31 March 2002, Ofgem has agreed that the insurance for this period only may be procured on a single source tender basis.

Appendix 7 Metering and Connections standards of performance

Table A7.1: Transco's connection standards of service

Standard	Work Area	Standard of Service	National Planned Performance Level	Stage 1 Liability Payment	Stage 2 Standard of Service	Stage 2 Liability Payment
CSOS 1	One-off quotations[1] < 73,200 kWh (desktop)	D + 3	90%	£30	D + 10	£40
CSOS 2	One-off quotations < 73,200 kWh (requiring a site visit)	D + 8	90%	£30	D + 15	£40
CSOS 3,5[2]	Single connection[3] quotations > 73,200 kWh (not requiring reinforcement)	D + 8	90%	£50	D + 15	£65
CSOS 3a,5a[4]	Single connection quotations > 73,200 kWh (requiring reinforcement and a site visit)	D + 12	90%	£50	D + 25	£65
CSOS 4	Quotation for new housing (multiple supply meter points)	D + 15	90%	£50	D + 25	£65
CSOS 6	Quotation for GT connection (not requiring reinforcement)	D + 8	90%	£50	D + 15	£65
CSOS 6a	Quotation for GT connection (requiring reinforcement)	D + 12	90%	£50	D + 25	£65
CSOS 7	Quotation to connect a self lay pipe (not requiring reinforcement)	D + 8	90%	£50	D + 15	£65
CSOS 7a	Quotation to connect a self lay pipe (requiring reinforcement)	D + 12	90%	£50	D + 25	£65
CSOS 8	Response to land enquiry from shipper, supplier or developer	D + 5	90%	£30	D + 15	£40
CSOS 9	Initial land enquiry by a PGT	D + 5	90%	£30	D + 15	£40
CSOS 10	Initial self lay enquiry	D + 5	90%	£30	D + 15	£40

*The liability payment is for failing to meet a standard of service.

D is the date the request is received.

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[1] A one-off quotation relates to the connection of single premises.
[2] CSOS 3 applies to quotations for shippers. CSOS 5 applies to quotations for non-shippers.
[3] A single connection quotation can cover a number of premises.
[4] CSOS 3a applies to quotations for shippers. CSOS 5a applies to non-shippers.

Table A7.2 Draft guaranteed standards of performance for metering

No.	Service	Required Performance	Compensation Payment
1	Providing a meter	Arrange and keep appointment within 2 working days for domestic customers and 4 working days for non-domestic customers, to an existing connection	Domestic £20 I&C £100
2	Responding to meter problems	Visit within 7 working days or a substantive reply within 5 working days	Domestic £20 I&C £100
3	Making and keeping appointments on metering business	A morning or afternoon appointment, or a timed appointment if requested by the customer	£20
4	Responding to pre-payment meter faults	Attend within 3 hours on weekdays and 4 hours at weekends	£20

Table A7.3: Draft overall standards of performance for metering

No.	Service	Required performance
1	Visiting to reposition the meter, when asked to do so by the customer	15 working days following acceptance of the quote
2	Changing meters when necessary on change of tariff	Within 10 working days of a domestic customer's request in all cases.
3	OS 3 is not applicable to Transco	N/A
4	Responding to pre-payment meter faults: Within 3 hours on weekdays; and Within 4 hours at weekends	 98% 95%
5	All consumers who have been disconnected for non-payment to be reconnected so as to restore supply before the end of the working day after they have paid the bill, or made arrangements to pay	100%

Appendix 8 Summary of draft findings of Ofgem's consultants

Ofgem's consultants have reviewed specific areas of operating and capital expenditure in deriving efficient levels of cost. This appendix summarises the consultants' draft findings.

Operating Expenditure

The consultants have reviewed the following areas of cost:

- network operating costs;
- staff and related costs including manning levels in the finance and procurement and logistics functions;
- other operating expenditure associated with procurement and logistics;
- information systems (IS): the cost of operating the information systems which support Transco's particular role in the UK gas industry, as well as the general IS needs of the business;
- NTS shrinkage: the cost of gas leakage from the distribution network, gas used by Transco within its pressure reduction stations and the theft of gas;
- restructuring costs;
- liability costs;
- insurance costs; and
- corporate and other re-charges, and leasing costs.

Network operating costs

Ofgem's consultants have carried out a review of Transco's operating practices and identified potential cost reductions for the period to 2007. They have proposed efficiencies in the following areas:

- network replacement and repair: cost reductions through the introduction of new engineering techniques;
- low pressure storage facilities: cost reductions through the introduction of value analysis; and
- engineering costs: the timely roll-out of best practice across all LDZs, driven by inter-LDZ comparisons.

Staff and related costs

Ofgem's consultants have carried out a review of Transco's policies and manning levels and have identified potential cost reductions for the period to 2007 based on the following findings:

- benchmarking of Transco's finance function indicates over-manning;
- inter-LDZ comparisons suggest that there is scope for alignment across the LDZs;
- the manning levels in the Scotland LDZ Asset function can be reduced, based on the view that the greater autonomy of this LDZ will not deliver benefits to customers that justify the increase in costs;
- discrepancies exist between the wage and salary levels used in the BPQ forecasts and Transco's national pay structure;

- Transco’s staff holiday allowances exceed benchmarked national averages;

- potential over-manning has been identified in Transco’s Account Management, Communications and Customer Relations, Strategy and Business Development, Regulation and Human Resource functions;

- Employee Profit Sharing Scheme (EPSS) costs: based on an underlying assumption that Transco’s pay levels should be at the market median, the distribution of profits to employees increases pay levels above the market median and should be removed; and

- the average redundancy cost used by Transco in its BPQ forecasts is not consistent with the average redundancy entitlement of Transco staff.

Pension costs

The consultants have also investigated Transco’s pensions costs. Transco participates in the Lattice Group Pension Scheme which is administered by the Lattice Group plc, Transco’s ultimate parent company. Transco currently pays pension costs (as a percentage of salaries) to Lattice Group plc.

The issues being addressed by Ofgem and its consultants are:

- the level of payments made by Transco to Lattice Group plc in respect of pensions;
- the payments made by Lattice Group plc to the Scheme in respect of Transco employees;
- the impact of the current accounting standard SSAP24 and the changes to SSAP24 recently announced by the Accounting Standards Board, which has published Financial Reporting Standard 17 “Retirement Benefits” (FRS17); and
- the treatment of the current surplus in the Scheme and whether this surplus should accrue to customers or shareholders.

The consultants’ draft reports were produced in advance of some information being provided by Transco. Based on the information available to them, they considered that only the current 3 per cent employer’s contribution should be allowed.

Further work is being carried out to investigate the costs of the pension benefits that will be earned by Transco employees during the next price control period, taking into account staff profiles, and to consider the appropriate treatment of the current pension scheme surplus.

Procurement and Logistics

Ofgem’s consultants have considered the management and operation of Transco’s procurement and logistics function. As a result, they have proposed further savings in manpower costs. These are summarised as follows:

- the consultants accept that Transco recognises the linkage between contracting and purchasing arrangements and the achievement of cost efficiencies through greater clarity of accountability. However, they consider that the users of goods and services lack empowerment to determine the best approach to meet the strategic needs of their business, and that the introduction of such empowerment would reduce administrative costs and manpower;
- benchmarking analyses and work which Transco itself has commissioned suggests that it incurs comparatively high costs in the process of purchasing, and raises excessive numbers of purchase orders;

- the use of procurement cards and e-procurement applications: Ofgem's consultants consider that these techniques could generate further efficiencies, allowing the numbers of staff involved in procurement administration to be reduced; and
- Transco uses Engineering Period Contracts (EPC) to procure LDZ engineering services mainly for capital projects. The consultants consider that the management costs associated with these contracts should be lower.

Ofgem's consultants also noted that non manpower-related savings could be achieved through the measures summarised below:

- Transco has introduced framework agreements with suppliers of key goods and services. The consultants considered that this approach should be extended to low value, high demand goods; and
- approximately 10,000 purchases each year pass through Transco's logistics network. Currently there is a single contract for materials distribution which is due to expire in 2002. Ofgem's consultants consider that the next contract should include better incentives on the contractor, through a risk and reward framework. This would deliver on-going savings to Transco.

Information Systems (IS)

Transco's Information Services business area develops and maintains the systems which support Transco's unique position in the GB gas industry. It also provides general IS services across Transco's business. Ofgem's consultants have focused on areas considered most likely to deliver cost savings:

- the consultants considered Transco's assumed real price increases in software licence fees and recommend a lower real price increase assumption of 3 per cent per annum; and
- advancing the consolidation of server environments would bring savings in the early years of the next price control period.

Shrinkage

Approximately 91 per cent of Transco's LDZ shrinkage in 1999 was due to leakage from mains and services. As leakage cannot be measured directly, it is calculated by Transco as a fixed percentage of LDZ throughput. A figure of 0.83 per cent of throughput is currently used for leakage across all LDZs, and this figure is based on the application of Transco's National Leakage Reduction Monitoring Model (NLRMM), which was derived in 1992. The 0.83 per cent figure (part of the LDZ shrinkage factor of 0.91 per cent) has been used by Transco in its forecasts for the next price control period, and Ofgem's consultants have considered whether this is still appropriate. The consultants have identified the following issues:

- the mains replacement programme will increase the proportion of polyethylene (PE) pipes with negligible leakage. The consultants consider that this programme would be expected to deliver benefits in the form of reduced leakage (on top of the safety benefits);
- the consultants consider the current application of pressure control and gas conditioning techniques to reduce leakage is inconsistent and sub-optimal across the LDZs. They concluded that improved implementation, combined with the mains replacement programme, could reduce the leakage factor to approximately 0.6 per cent by the end of the next price control period; and
- the consultants have also made the observation that reduced leakage would be expected to reduce the number of Publicly Reported Escapes, which require a response

by Transco's emergency service. They consider that further savings would be expected in this area, although these have not been quantified.

Transco's BPQ response includes costs for unaccounted for gas on the NTS. The consultants consider that these costs are due to statistical bias and should not be incurred by customers.

Restructuring costs

Transco believes that operating costs will be incurred due to the set-up of an unbundled connections business. The consultants consider that these costs are associated with the set-up of a Lattice Group connections subsidiary, and should not be incurred by the customers of the transportation business. The unbundling may generate savings elsewhere in the transportation business, although Transco have not identified any such savings. Ofgem's consultants have concluded that the set-up costs should be removed. As the costs are capitalised they have been removed from the capital expenditure projections.

Liability costs

Ofgem's consultants consider that the costs associated with certain liability payments should be removed from Transco's forecasts on the basis that these are not part of Transco's normal operations.

Insurance Costs

Ofgem's consultants have noted that Transco has chosen to purchase insurance cover rather than self-insure for the majority of risks. If the costs of insurance premia are included, it is also appropriate to include income from insurers for successful claims. In the absence of further information from Transco, the consultants have assumed that the income from successful claims has not been netted off against the insurance premium costs in Transco's forecasts and have included this income.

Re-charges

Ofgem's consultants have reviewed the level of re-charges from elsewhere in the Lattice Group, and the services provided in return. Based on analysis of the information available to date, the consultants consider that:

- Transco leases property from the Lattice Group, and Lattice also manages Transco's relationship with third party lessors. Re-charges from Lattice Property for these services may represent a deterioration of Transco's position since the demerger of Lattice from Transco or the costs of providing these service may not reflect "fair" market rates;
- Transco's fleet of commercial vehicles is leased from The Leasing Group, a Lattice subsidiary. Based on benchmarking by another commercial leasing company, the annual maintenance costs paid by Transco may be excessive;
- the corporate re-charges paid by Transco appear to be high, given the services provided and the existence of some over-laps between these services and certain functions within Transco itself; and
- the costs of technical training have increased since these were outsourced to Advantica. However, Transco stated in its BPQ response that these costs should be no greater than they were when the function was provided in-house. The consultants consider that the additional costs should therefore be removed.

Capital Expenditure

The consultants have reviewed the following areas of cost:

- high-pressure pipeline costs: the unit costs of NTS and LTS pipelines, both in the current period to date and as forecast through to 2007;
- compressor costs: the cost of investing in compression on the NTS, to satisfy both capacity and environmental requirements;
- mains and services costs: the unit cost and workloads associated with Transco obligations to meet capacity and safety requirements below 7 bar;
- capitalisation of wages and connections costs: staff costs, associated with investment projects, that are directly incurred by Transco and subsequently capitalised, and set-up costs for the connections subsidiary, which are also capitalised;
- procurement: the costs of Transco's procurement of capital items; and
- meters: the costs associated with both the purchase and installation of gas meters.

High-pressure pipeline costs

Transco forecasts that a total of 13 NTS pipeline projects will be progressed over the next price control period, along with 31 Local Transmission System (LTS) projects within the LDZs. Ofgem's consultants have identified savings in the following areas:

- Transco assumed that steel linepipe costs would undergo a 15 per cent step increase from 2002, resulting from a tightening in the world steel linepipe market. The consultants consider that this market tightening will not be so rapid, and have therefore concluded that the increase should be applied on a progressive basis over the period of the review; and
- benchmarking of LTS pipeline cost forecasts against both NTS pipelines and public data from the US Federal Energy Commission (FERC) has identified potential savings.

Compressor Costs

Much of Transco's proposed investment at compressor stations is driven by the Integrated Pollution Prevention and Control Regulations 2000 (IPPC regulations) (SI 2000/1973). New installations are subject to the IPPC regulations now, but specific technical guidance for existing installations is not expected to be available until 2006, when these become subject to the IPPC regime.
Environmental improvements (principally NOx reduction) may be achieved through improved controls and/or by renewing or upgrading the compressors. Transco proposes to upgrade stations either by replacement of the lead machine, or by the retrofitting of dry-low-emissions (DLE) combustion equipment to existing machines.
Ofgem's consultants have identified savings in the following areas:

- as stated in Ofgem's February paper, average planned spend on compressor replacements in the next price control period is approximately £18 million per year. The first major station upgrade project is due to be completed in 2003. Ofgem's consultants consider that this programme could be re-phased, while still satisfying Transco's obligations under the IPPC regime; and
- Transco has identified spend on DLE retrofits of £39 million in the period 2000 to 2007, with a unit cost of £1.5m. Ofgem's consultants have estimated the average cost of a retrofit in the next period to be approximate half Transco's estimates after including allowances for fleet discount, for economies of scale, and through combining this work with major maintenance.

Mains and services costs

Ofgem's consultants have proposed adjustments to Transco's forecast for the next period based on the following analyses:

- the consultants consider that Transco has used inappropriate unit costs in producing the forecasts;
- contractor costs typically comprise up to 70 per cent of the costs of mains and services work within the LDZs. In September 1999, Transco introduced a new form of contract for this work, known as the Engineering Period Contract (EPC). Ofgem's consultants have carried out a detailed review of the incentives offered to the contractors under the EPC, and consider that they will outperform the assumptions made by Transco in the BPQ response; and
- the use of value analysis within Transco lacks rigour.

Capitalisation of wages and connections costs

As discussed under operating expenditure, Ofgem's consultants have suggested that the level of industrial staff wages used in the forecasting of LDZ costs was too high. Since some of these costs are capitalised this leads to a reduction in capital expenditure. The costs of connections procured from the unbundled connections business will also be capitalised. The removal of the set-up costs of this business therefore leads to an adjustment in capital expenditure.

Procurement and logistics

The earlier discussion of operating expenditure summarised some cost saving proposals associated with procurement and logistics activities.
The majority of items procured by Transco are capitalised. Ofgem's consultants have identified the following areas where purchase costs can be reduced:

- the framework agreements used by Transco for the purchase of high volume materials, such as polyethylene pipe and fittings should factor in discounts reflecting Transco's levels of purchase;
- Since before the last price control review NTS contract costs have trended downwards. The consultants consider that this trend should continue as innovative contracting practices develop over time. They have also concluded that similar ongoing savings should be achievable on the LTS and in certain other contract areas; and
- IS is the only business area which does not use Transco's procurement & logistics function for its procurement needs. Ofgem's consultants have stated that approximately 90 per cent of US utilities consider that purchasing spend should include IT equipment and services. Using data from the Centre for Advanced Procurement Studies at Arizona State University, they have calculated that such companies typically set their procurement departments an annual savings target of the order of 4.5 per cent and have estimated savings based on applying such a target to Transco's IS procurement.

Meters

Some 85 per cent of Transco's forecast meter expenditure relates directly to the procurement and installation of meters. The remaining 15 per cent relates to Transco's allocation of other capital items (central costs) to metering.

A breakdown of Transco's forecast expenditure by meter type is set out below:

£million	2002/03	2003/04	2004/05	2005/06	2006/07
Domestic	45	42	50	46	45
Prepayment	47	52	64	66	59
Non-domestic	26	21	21	20	20
Sub-total	118	115	135	132	124
Other	26	25	20	21	21
Total	144	140	155	153	145

It should be noted that forecast expenditure on prepayment meters accounts for 46 per cent of total expenditure on meters over this period. Presently, around 8.5 per cent of domestic gas customers have a prepayment meter.

Ofgem's consultants analysed the unit costs and volumes underpinning Transco's forecasts. Cost adjustments were derived based on the following findings:

- Transco is forecasting a significant increase in the number of domestic meter exchanges as part of its meter accuracy policy in comparison to the period 1997 to 2002;
- workload and hence costs associated with Transco's domestic meter replacement programme are extremely sensitive to the use of a 2 per cent accuracy range to trigger the replacement of a particular meter type;
- Transco estimates that the prepayment meter population will grow on average by 15 per cent per year over the current price control period, and that growth will continue at the rate of 6 per cent per year between 2002 and 2007;
- there are wide variations in meter installation and exchange costs across LDZs, over time, and between contract labour and direct labour; and
- an allowance has been made by Transco for the effects of competition in metering services in respect of the number of new meter installations, but not for other metering services.

Appendix 9 Description of financial terms

The following financial terms have been used in this document:

EBIT interest cover

$$\frac{\text{Profit on ordinary activities before interest and tax}}{\text{Total interest expense net of interest income}}$$

EBITDA interest cover

$$\frac{\text{Profit on ordinary activities before interest, tax, depreciation and amortisation}}{\text{Total interest expense net of interest income}}$$

FFO (Funds from Operations) interest cover

$$\frac{\text{Cash flow from operations after payment of current tax liabilities}}{\text{Total interest expense net of interest income}}$$

FFO (Funds from Operations) to total debt

$$\frac{\text{Cash flow from operations after payment of interest and current tax liabilities}}{\text{Total debt less surplus liquidity}}$$

Balance sheet gearing D/D + E

$$\frac{\text{Total debt less surplus liquidity}}{\text{Total debt less surplus liquidity } \textbf{plus} \text{ issued share capital and reserves}}$$

Appendix 10 Transco's Gas Transporter licence

Gas Transporter Licences

GT licences will soon be subject to a new set of standard licence conditions. This will significantly change the format of the current Transco licence. Transco will remain subject to standard and special licence conditions. Where licence condition numbers and conditions are referenced in this document they relate to Transco's existing licence. Standard licence conditions apply to all GTs.

A Gas Transporter (GT) has a duty, under section 9 of the Gas Act, to develop and maintain an efficient and economical pipeline system for the conveyance of gas and, subject to that, so far as it is economical to do so, to comply with any reasonable request to connect to that system and convey gas by means of that system to any premises. A GT has a further duty under section 9 of the Gas Act, to avoid any undue preference or discrimination in the connection of premises to any pipeline system operated by it or in the terms on which it undertakes the conveyance of gas by means of such a system.

The GT licence places certain obligations on the GT, including the requirement that the GT introduces a network code which sets out the arrangements between the GT and shippers for the use of, and connection to, that GT's pipeline system. All network codes are required to put in place transportation arrangements which facilitate the following objectives as set out in Standard Condition 7 of the GT licence:

(a) the efficient and economic operation by the licensee of its pipeline system;
(b) so far as is consistent with sub-paragraph (a), the efficient discharge of its obligation under its licence;
(c) so far as is consistent with sub-paragraphs (a) and (b), the securing of effective competition between relevant shippers and between relevant suppliers; and
(d) so far as is so consistent, the provision of reasonable economic incentives for relevant suppliers to secure that the domestic supply security standards are satisfied as respects the availability of gas to their domestic customers.

Standard Condition 11(1) of the GT licence requires the GT to conduct its transportation business in the manner best calculated to ensure that neither the GT nor any person related to it, nor any gas shipper, obtains any unfair commercial advantage.

Under Standard Condition 12, Transco is required to submit a long-term development statement in respect of its transportation arrangements.

Standard Condition 13(2) sets out certain gas security standards to which the licensee shall plan and develop its pipeline system. This standard is such that the pipeline system can meet (taking into account operational measures, storage and interruption) the peak aggregate daily demand that is only likely to be exceeded in 1 in 20 years.

Under Standard condition 3 of the GT licence, the GT must provide a statement of charges for the transport of gas through its pipelines. Standard condition 6 allows a GT to charge shippers supplemental charges for the costs of supplying and laying pipes to designated areas. Any GT wishing to apply charges under condition 3 or 6 must establish a charging methodology. The condition 6 charging methodology must be accepted by Ofgem.

Connections

The Gas Act, Utilities Act and Gas Transporter's licence impose duties upon GTs when connecting premises in certain circumstances.

The 23 metres rule

Section 10 (1), (2) and (5) of the Gas Act obliges a GT to:

- connect premises within 23m of a relevant main and supply and lay the necessary pipe. The customer may be charged for provision and laying of the pipes but not for the final connection; or
- connect a pipe supplied and laid by the owner or occupier of a premises if the pipe is fit for purpose, charging for the final connection to the relevant mains. The pipe then becomes the property of the GT.

The above duties only apply to connections where the supply of gas will not exceed 2,196,000 kWh per year.

The 10 metres rule

Under Standard Condition 5 of the GT licence a GT connecting premises under the 23m rule, which consume no more than 73,200 kWh per year, can only charge for the cost of supplying and laying:

- any pipe laid on the property of the applicant which is not dedicated to the public use; and
- any pipe, after the first ten metres from the relevant main, laid on property of the applicant which is dedicated to the public use or on any third-party land.

Each GT including Transco is able to recover the costs (which cannot be charged to the customer) incurred in providing the statutory connections from all its customers through transportation charges.

Transco's GT licence

Transco's GT licence comprises Standard and Special Conditions. Standard Conditions apply to all GTs.

Certain parts of the Standard Conditions apply to Transco in a modified form. For example, Amended Standard Condition 25 places certain restrictions on the ability of Transco to dispose of it assets or to receive or provide services to parent or subsidiary undertakings of the Licensee, and in particular that any such transactions should be on an arm's length basis and on normal commercial terms.

The special licence conditions apply only to Transco. For example, Special Condition 3 requires the Licensee to act in a manner calculated to secure that it has sufficient management and financial resources to carry on its business. Special Condition 4 requires the Licensee to use reasonable endeavours to ensure that an investment grade credit rating is maintained on its corporate debt.