

2 Conclusions to the Gas Act references

2.1. This chapter summarizes the background, and presents the main issues relevant to the inquiry as follows:

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The references

2.2. Under a reference dated 31 July 1992 (made under section 24(1) of the Gas Act-see Appendix 1.1 of this volume), the Director asked us to investigate and report on whether the operation by BG of its pipeline system and other facilities used for the conveyance (generally referred to in this report as 'transportation') and storage of gas as part of the gas supply business operates, or may be expected to operate, against the public interest; and, if so, whether the effects adverse to the public interest could be remedied or prevented by modifications of the conditions of the Authorisation.

2.3. In a schedule to the reference, the Director specified the effects adverse to the public interest which, in his opinion, the matter specified has, or may be expected to have. The Director specified firstly the absence of provision for the establishment of an independent undertaking to operate the pipeline system and other facilities used by BG for the conveyance and storage of gas which would not be subject to conflicting interests in securing:

- (a) transparency of the prices charged, the costs incurred and the operating methods used in respect of the conveyance and storage of gas;
- (b) proper allocation to various parts of the gas supply business of costs incurred and returns received by that business; and
- (c) protection of information relating to the conveyance and storage of gas from which BG might obtain unfair commercial advantage,

and thereby avoid the restriction or distortion of competition between BG and other persons whose business consists of or includes the supply of gas. Secondly, the Director specified the absence of enforceable requirements imposed on BG in relation to the conveyance and storage of gas calculated to secure effective competition between persons whose business consists of or includes the supply of gas pending the establishment of such undertaking as is described above.

2.4. In a second reference, dated 10 August 1992, also made under section 24(1) of the Gas Act, the Director asked us to investigate and report on whether the exercise by BG of its function as a public gas supplier within the meaning of section 7(1) of the Gas Act of fixing tariffs for the supply of gas in accordance with section 14 of the Act (restricted only by conditions 3 and 4 of the authorization dated 28 July 1986 which has effect as if granted under section 7 of the Gas Act to BG) operates, or may be expected to operate, against the public interest; and if so, whether the effects adverse to the public interest could be remedied or prevented by modifications of the conditions of the Authorisation.

2.5. On 31 July 1992 the Secretary of State also sent two references to the MMC, made under sections 47(1), 49(1) and 51(1) of the Fair Trading Act. The first reference asked us to investigate and report on the existence or possible existence of a monopoly situation in relation to the supply within Great Britain of gas through pipes to tariff customers and to non-tariff customers. The second reference asked us to investigate and report on the existence or possible existence of a monopoly situation in relation to the supply within Great Britain of the services of the conveyance or storage of gas by public gas suppliers.

2.6. The making almost simultaneously of four references to the MMC, under two different Acts, is unusual. There is a considerable overlap between the subject matter of the four references, and while we have approached each of the references in its own terms, we cannot sensibly reach conclusions on any one of them without taking into account the factual background of, and where appropriate, our potential conclusions on, the others. The Fair Trading Act references cover, in effect, BG's entire UK gas supply operation; the Gas Act references, on the other hand, do not relate to the supply of gas to the non-tariff market, over which the Director has no statutory powers to make a reference to the MMC, nor other than in respect of the fixing of tariffs-to the tariff market. We did not, however, find it possible to reach a conclusion on those matters included in the Gas Act references, in particular the transportation and storage of gas, without taking into account, *inter alia*, those matters, such as the supply of gas to tariff customers (other than the 'fixing of tariffs') and to non-tariff customers, excluded from the Gas Act references. In practice, therefore, so far as is possible and legally permissible we have had to approach the four references as one inquiry. We have done so in the belief that this was the most sensible method of fulfilling our statutory duties as well as the most helpful course for those seeking to give evidence or make submissions to us.

2.7. In determining, under the Gas Act references, whether any matter operates or may be expected to operate against the public interest, we are required to have regard to the duties imposed on the Secretary of State and the Director by section 4 of the Gas Act (as amended by the Competition and Service (Utilities) Act 1992-the 1992 Act). The Director and Secretary of State are required each to exercise his function under Part I of the Gas Act in the manner he considers best calculated to secure that authorized gas suppliers satisfy, so far as it is economical to do so, all reasonable demands for gas in Great Britain; to secure that such persons are able to finance the provision of gas supply services; and, in relation to their function as to conveyance and storage of gas, to secure effective competition between persons whose business consists of or includes the supply of gas. Subject to these requirements, the Secretary of State and Director must exercise their functions in the manner best calculated to protect the interest of gas consumers in respect of prices charged and the other terms of supply, continuity of supply, and the quality of gas supply services; promote efficiency and economy on the part of authorized gas suppliers and the efficient use of the gas supplied; protect the public from dangers arising from the transmission, distribution or use of gas; and enable effective competition in supply of gas at rates which, in relation to any premises, exceed 2,500 therms a year. In protecting the interests of gas consumers in respect of the quality of gas supply services, particular account must also be taken of the interests of those who are disabled or of pensionable age. We have taken the provisions of section 4 of the Gas Act fully into account in our inquiry.

2.8. Under section 84 of the Fair Trading Act, we are required, in considering the public interest under the Fair Trading Act references, to take into account all matters that appear to us in the particular circumstances to be relevant, and among other things we must have regard to matters such as the maintenance and promotion of effective competition, and promotion of the interests of consumers, purchasers and other users of goods and services. In practice, we have not found any conflict in public interest criteria between the two Acts.

2.9. While we are required to report on each of the four references, separate reports are not required in each case. We have taken the view that it is correct to submit two reports in all: one to the Secretary of State

on the two Fair Trading Act references, the other to the Director on the two Gas Act references. The bulk of the subject matter of our inquiry is common to both reports because of the interrelationship of the issues and the need to facilitate a proper understanding of the questions and our conclusions. In general, the evidence submitted to us also did not distinguish between matters relevant to the Gas Act or Fair Trading Act inquiries: we have, therefore, presented this evidence in two volumes that are common to the two reports. Much material is also repeated verbatim in the two conclusions; but we have not included in the Gas Act conclusions any matters that do not, in our view, relate directly or indirectly to those falling within the jurisdiction of the Director.

British Gas

2.10. As shown in Table 2.2 of Volume 2, gas accounts for nearly one-half of final energy used in the UK, excluding transport uses, a significant increase since the mid-1960s when it accounted for less than 10 per cent. Gas is particularly important for domestic consumers, for whom it accounts for about two-thirds of energy used, and it is now supplied to some 18 million out of about 22 million UK households. It also accounts for about one-third of the energy used by industry. In 1992 BG sold over 90 per cent of all gas supplied to final customers in Great Britain, and it provides almost all facilities for the transportation and storage of gas in Great Britain: its competitors, therefore, are also almost totally dependent on BG's facilities for the transportation and storage of gas.

2.11. BG is one of the largest public companies in the UK. Its interests comprise UK gas supply (the operation of the pipeline system and sale of gas in the UK); appliance sales, installation and maintenance in the UK; Global Gas representing interests in several overseas gas businesses in countries including Canada, the USA, Argentina and India; and Exploration and Production (E&P), with interests in the UK and overseas, such as its proposed investment in Kazakhstan. As well as its dominance in the supply, transportation and storage of gas, BG directly owns some 17 per cent of UK gas production, substantially from gas fields in the North Sea.

2.12. As shown in Appendix 6.4 of Volume 2, in 1992 BG's turnover was almost £10.3 billion, of which £8.1 billion arose from UK gas supply activities, with which our various terms of reference are concerned. Capital employed on a current cost (CCA) basis, which BG has used in preparing its accounts since the late 1970s, was some £24.6 billion at December 1992, of which £19.1 billion was in UK gas supply. On a historic cost (HCA) basis, its capital employed was some £12.8 billion. Its market capitalization at the end of December 1992 was some £12.6 billion. Since it was privatized in 1986, BG has increasingly diversified into other activities: as shown in Table 8.1 of Volume 2, of BG's total investment in 1992 of £2.7 billion, over £1.4 billion, slightly over one-half, was on E&P and Global Gas.

2.13. Within the UK, BG supplies gas to almost 18.5 million customers. Of those, there are some 17.8 million domestic customers, about 570,000 commercial customers and 91,000 industrial customers: some commercial and industrial customers purchase gas for use at a number of premises. The Gas Act distinguishes between supply to non-tariff and to tariff customers. Until August 1992 non-tariff customers—the larger industrial and commercial users—were those using more than 25,000 therms at any individual premises and supplied at those premises under the terms of special agreements with BG. They were supplied on either a 'firm' basis, BG supplying gas to meet their demands throughout the year, or (an option available only to users of more than 200,000 therms a year) on an 'interruptible' basis, under which BG was entitled to stop supplying up to a fixed number of days in the year, normally exercised at time of peak demand. Customers using 25,000 therms a year or below at individual premises were classified as 'tariff' customers, the price of gas to tariff customers being regulated by the Director according to the terms of BG's Authorisation. Until August 1992 companies other than BG were allowed to supply gas only to premises using over 25,000 therms a year and in almost all cases this involved supply through BG's pipes. As from August 1992 competition was also allowed in supply of gas to premises using between 2,500 and 25,000 therms a year: customers of BG's competitors in this consumption range would also now be 'non-tariff' customers as would any customers supplied by BG under special agreements, which BG has not to date chosen to do in that range.

2.14. Table 2.1 summarizes the volume and value of gas supplied by BG to tariff and non-tariff customers in 1992, and the volume of gas transported for third parties over BG pipelines in that year and associated income. Table 2.1 also distinguishes between supply to domestic and non-domestic tariff customers, the main basis on which BG currently collects information. As is apparent from the table, domestic users account for some 85 per cent of gas supplied to tariff customers, the remainder being accounted for by smaller commercial, and to a lesser extent industrial, customers. Most domestic customers use less than 2,500 therms a year; by contrast most gas supplied to non-domestic tariff customers is to premises using over 2,500 therms a year-see also Appendix 4.1 of Volume 2.

TABLE 2.1 **BG supply of gas to tariff and non-tariff customers and of third party transportation services, 1992**

	Volume of gas supplied		BG revenue		BG allocated costs*	Allocated operating profit	Current cost return on BG assets
	m therms	As %	£m	As %	£m	£m	%
Tariff customers	13,127	65.7	6,541	81.8	5,733	808	4.9
of which:							
-domestic	11,151	55.8	5,649	70.6	5,026	623	4.2
-non-domestic	1,976	9.9	892	11.1	707	185	11.2
Non-tariff customers	5,804	29.1	1,392	17.4	1,229	163	5.2
of which:							
-firm	2,404	12.0	765	9.6	686	79	5.6
-interruptible	3,400	17.0	627	7.8	543	84	N/A
Gas transportation for third parties	1,047	5.2	67†	0.8	49	18	4.8
Total‡	19,977	100.0	8,000	100.0	7,011	989	5.3

Source: BG.

*Returns for individual market sectors are not audited and reflect BG's methods of cost allocation.

†Transportation income only.

‡Excludes release gas (see paragraph 2.28) which accounted in 1992 for some 121 million therms, £23.1 million income, and £0.3 million profit.

Note: 'Contract customers', referred to in the chapter, are the non-tariff customers supplied by BG or by third parties over BG's pipelines.

2.15. Table 2.1 also shows estimated costs and CCA returns on assets on each category of business under BG's current system of cost allocation (see paragraphs 6.32 to 6.52 of Volume 2 for an explanation). HCA returns would be significantly higher: in 1992 the CCA return for the BG group was 6.0 per cent, the HCA return 14.1 per cent. Table 2.2 summarizes the CCA return on net assets (RONA) for gas supply overall and, as calculated by BG on a consistent cost allocation basis (see paragraphs 6.35 and 6.57 to 6.60), for supply to tariff and contract customers and for third party transportation since 1987/88.

TABLE 2.2 Gas supply: current cost rates of return on net assets

	<i>per cent</i>					
	1987/88	1988/89	1989/90	1990/91	1991	1992
RONA						
Tariff	4.1	5.3	4.3	6.5	6.8	4.9
Contract: Firm	18.7	15.5	11.9	10.0	8.9	5.6
Interruptible	*	*	*	*	*	*
Third party transportation				1.7	3.7	4.8
Gas supply overall	6.3	6.6	5.4	7.2	7.1	5.3

Source: BG.

*BG does not allocate capacity-based assets to interruptible turnover and so does not calculate RONAs for interruptible sales.

The regulatory framework of the gas industry

2.16. The privatization of BG in 1986 included the setting up of a complex regulatory framework. This is described in some detail in Chapter 1 of Volume 2; but the following paragraphs summarize some of the main elements of relevance to our inquiry.

2.17. The Gas Act gives BG as a public gas supplier a general duty, *inter alia*, to meet all reasonable requests to supply gas as far as it is economical to do so (section 9) and to avoid undue preference in supply of gas and in the fixing of tariffs to customers using below 25,000 therms a year at any individual premises. It is also required (section 10) to supply on a tariff basis any customers using 25,000 therms a year or less within 25 yards of a relevant main, or connected to a main. BG's consent was required for the supply by competitors to any premises using less than 25,000 therms a year (subsequently amended by statutory instrument to 2,500 therms a year, as explained in paragraph 2.30). BG had no such monopoly in supply of gas to non-tariff customers, other suppliers being entitled to use BG pipelines for this purpose.

2.18. As a public gas supplier, BG can operate only under the terms of its Authorisation, granted by the Secretary of State in July 1986. This was for a minimum period of 25 years, with provision for revocation under certain circumstances set out in Schedule 2 of the Authorisation. Section 7(7)(a) of the Gas Act provides that 'an authorisation may include such conditions relating to the supply of gas, or requiring information to be furnished to the Director or published, ... as appear to the Secretary of State to be requisite or expedient having regard to the duties imposed by Section 4'. The initial Authorisation granted by the Secretary of State covered separation of accounts; restriction of prices to tariff customers and standing charges; requirement to publish maximum prices for contract customers and a statement of principles upon which connection charges would be payable; provision of information to the Director and the Gas Consumers Council (GCC); requirement to publish guidance on charges for conveyance of gas for others; provision for supply of back-up gas and emergency service; requirements for a code of practice for tariff gas supplies and of services for persons of a pensionable age or disabled; and provision for promotion of efficient use of gas, supply to public lamps, and payment of fees. The Secretary of State, having granted an authorization to a public gas supplier, has no powers subsequently to modify it, other than in order to remedy any adverse effects found by the MMC during an inquiry under the Fair Trading Act or the Competition Act 1980.

2.19. The Director is entitled to modify the BG Authorisation by agreement with BG (although the Secretary of State could overrule such a modification). The Director can, however, in the event of a dispute with BG on such a proposed modification, also make a reference to the MMC to establish whether a matter specified in the reference operates or may be expected to operate against the public interest; if so, whether any adverse effects could be remedied by a modification of the Authorisation; and, if so, to specify such a modification. In the event of these conditions being satisfied, the Director may modify the Authorisation as he thinks appropriate to remedy the adverse effects identified but having regard to the modifications specified in the MMC's report. The Director's powers to make references to the MMC under the Gas Act are limited to the tariff market, apart from his additional power to refer matters relating to the conveyance and storage of gas, subsequently conferred by the later 1992 Act, section 38(4).

2.20. The Gas Act also gives the Director the power to determine conditions for conveyance of gas by BG for other parties, in the event of dispute between BG and independent shippers of gas, according to criteria specified in section 19(5) of the Gas Act (see paragraphs 1.19 to 1.21 of Volume 2). Otherwise, however, supply to the non-tariff market was not made subject to any formal system of price regulation; at the time of the MMC's 1988 report, the Department of Energy told us that this was because of greater competition from other fuels than in the case of tariff customers, and the scope for competition from other suppliers using the BG pipelines (see paragraph 8.15 of the 1988 report). Matters relating both to the non-tariff market, as well as to the conveyance and storage of gas, remained within the responsibility of the DGFT under the Fair Trading Act. The making of monopoly references as to the supply of gas to the tariff market was excluded from the powers of the DGFT under the Fair Trading Act, but the Secretary of State may refer any aspect of the supply of gas including the tariff market to the MMC under the Fair Trading Act, as in the present instance.

2.21. It was strongly put to us that, at the time of privatization in 1986, shareholders were given firm assurances in, for example, the prospectus as to the future structure of BG and that, as a consequence, there were limits to the recommendations we can make in order to remedy any adverse effects we may identify. We have been advised and accept that such a consideration does not affect our statutory obligations and should not deter us from considering whatever action we believe necessary to remedy any adverse effects that we may identify during the course of an inquiry under the Gas Act; we have reached the same conclusion on this point as did our 1988 inquiry under the Fair Trading Act. The references in the prospectus (for example, to BG being an integrated gas supply business, to the provisions of the Gas Act such as BG's rights and obligations as a public gas supplier and to BG's expectations that it will remain the sole supplier to the domestic market) were qualified, amongst other things, by reference to the provisions of competition legislation, and alternatively to policy changes consequent upon change in the Government. The Gas Act contemplates the possibility of investigation by the MMC, and action consequent upon the results of that investigation. We are not restricted, therefore, from a full consideration of any action necessary to remedy any effects adverse to the public interest.

The MMC's 1988 report and subsequent developments

2.22. Shortly after privatization of BG and in response to a number of complaints from users, the DGFT referred to the MMC the supply of gas to non-tariff customers. The MMC's main conclusions were that:

- (a) Many users had no immediate or realistic alternative to gas, nor an alternative gas supplier.
- (b) There was extensive discrimination in the pricing of gas to contract customers, attributable to the existence of the monopoly situation: prices were indeed directly and inversely related to the ease with which customers could use alternative fuels. The MMC believed that this was against the public interest, since it imposed higher costs on customers less able to use alternative fuels; and that by relating prices to those of the alternatives available to each customer, BG was in a position selectively to undercut potential competing gas suppliers, acting as a deterrent to new entry and inhibiting competition.
- (c) Other BG practices operated against the public interest, namely:
 - lack of transparency in prices;
 - BG's refusal to supply interruptible gas to some consumers;
 - the pricing of gas for combined heat and power schemes (processes producing both useful heat, eg steam, and electricity);
 - certain of its contract terms;

- BG's failure to provide adequate information on the costs of common carriage;
- its ability to use information obtained when negotiating common carriage terms to identify potential customers of competing suppliers and the potential source of gas; and
- BG's position as a dominant (indeed, at that stage sole) purchaser of gas.

2.23. To remedy these adverse effects the MMC's main recommendations were that:

- (a) BG should publish a schedule of prices for firm and interruptible gas, and not discriminate in pricing or supply.
- (b) It should not refuse to supply interruptible gas on the basis of the use made of the gas, or the alternative fuel available.
- (c) It should publish further information on common carriage terms.
- (d) It should contract initially for no more than 90 per cent of any new gas field.

The MMC also, however, stated, 'If competition in the supply of gas fails to develop over the next five years, further consideration will then be appropriate as to whether changes in the structure of the gas industry are necessary to ensure competition in the supply of gas' (paragraph 8.98 of the 1988 report).

2.24. The recommendations were implemented broadly as proposed, by modification of the Authorisation and by undertakings agreed with the DGFT. The '90/10' rule was introduced only for a two-year period. Where the MMC had recommended this be applied to individual fields, the Secretary of State chose to apply it to BG's gas purchases as a whole: in the event, BG initially applied the rule on a field-by-field basis. The Government also announced that there would be a further review in July 1991 by the DGFT of progress towards the establishment of a competitive market.

The Office of Fair Trading review, 1991

2.25. The review by the DGFT was completed in September 1991 (and published in summary version in October of that year). The review found that BG had complied with the undertakings given following the MMC's report: it had, indeed, by a 'swap' arrangement released more gas than required by the 90/10 target, but much of the gas released had been for power generation (a development largely unforeseen at the time of the MMC's 1988 report) rather than for general industrial or commercial use. The Office of Fair Trading (OFT) review concluded that the remedies introduced following the 1988 report had been 'ineffective in encouraging self-sustaining competition to BG'.

2.26. Particular obstacles to the growth of competition identified were the lack of available gas for competing suppliers to the industrial and commercial sector, BG's monopoly supply to tariff customers, and finally BG's special position in relation to the storage and distribution system. The DGFT referred to BG's 'ability to cross-subsidise, to act in a predatory manner, and to set price levels in the interruptible market that the competition cannot match'. The review identified key areas for competition that would need to be addressed, namely that BG should:

- release a significant proportion of its contracted gas, and reintroduce a revised version of the 90/10 undertaking;
- agree an appropriate undertaking to relax its tariff monopoly; and
- establish a separate subsidiary to operate the gas transmission and storage system on a non-discriminatory basis at arm's length from the rest of BG, and agree to Office of Gas Supply (OFGAS) regulation of its charges.

Unless BG agreed to undertakings in these areas, the DGFT stated that he would refer the matter to the MMC.

2.27. The review also suggested consideration of Government action in other areas, namely:

- the development of policies to allow greater freedom for international trade in gas;
- abolition of the tariff threshold;
- strengthening the powers of the Director; and
- modification of the planning procedures for new pipelines.

The subsequent undertakings

2.28. After protracted negotiation, BG agreed undertakings with the OFT in March 1992. These are reproduced at Appendix 1.2 of Volume 2. In summary, they required BG to:

- (a) Create the conditions by which suppliers other than BG should be able to supply at least 60 per cent of gas to contract (non-tariff) customers by 1995, excluding gas used for power generation, feedstock (use of natural gas as a raw material for production of ammonia and methanol) and vehicles powered by natural gas. This target would be equivalent to less than 20 per cent of total gas supplied (excluding power generation) in the UK. This included a requirement that BG release (ie sell) to other suppliers a sufficient volume of gas previously contracted to BG to enable its competitors to supply that share of the market (the release scheme).
- (b) Establish a separate gas transportation and storage unit (BG T&S), with separate accounts in a form agreed by the OFT, and to endeavour to reach agreement with the DGFT on the basis on which BG T&S will be regulated. BG also undertook to develop a transparent pricing system for transportation to apply 'equally and even-handedly' to BG Trading and other shippers (other suppliers transporting gas over the BG pipelines), to provide services for BG Trading and other companies, and to put in place arrangements to provide gas conveyance, system reinforcement, and extension and site connection on the basis of non-discrimination between BG and other shippers. The undertakings also required BG T&S to treat information received from other parts of BG and other shippers on the same basis, and to provide quotations for shipping of gas in five to ten working days, on a non-discriminatory basis between BG Trading and other shippers (see also paragraph 2.90).

With the making of the current references, both the Director and the DGFT announced that they no longer regarded the undertakings on transportation and storage as in force: BG told us that it still regarded those undertakings as its 'decided policy', although with some slippage from the time-scale originally envisaged. The undertakings on release of gas and market share are, however, still in force (although extrastatutory and unenforceable, were they to be breached, other than by further reference to the MMC).

2.29. Shortly after these undertakings, also in March 1992, BG published a consultation document on the methodology of transportation charges. However, following lack of progress in discussions between BG and OFGAS on a number of key aspects, on 31 July 1992 the Director made the conveyance and storage reference to the MMC under the Gas Act. BG, however, had become increasingly concerned about the financial impact upon it of a number of regulatory changes; it also disagreed with OFGAS on the rate of return (ROR) appropriate for third party transportation charges. Following discussion between the Secretary of State and BG, the Secretary of State on the same day made the two references to the MMC under the Fair Trading Act; finally, some ten days later the Director made the further reference under the Gas Act relating to the fixing of tariffs.

2.30. After the OFT report, the 1992 Act came into force. It provided for the Secretary of State by statutory instrument to remove or lower the threshold below which competitors could not supply gas. As noted earlier, this threshold was reduced on 6 August 1992 to supply to premises using 2,500 therms a year or below; the Department of Trade and Industry (DTI) also announced that the scope for further change would be reviewed in 1993.

2.31. Following the references, both OFGAS and the OFT have continued work on the subject matter of the OFT undertakings, in particular on the operation of a separate transportation and storage unit within BG. In November 1992, for example, OFGAS issued a discussion document, *Gas Transportation and Storage*, and, in February 1993, BG and OFGAS issued a joint consultation document on the same topic, based primarily on BG's proposals, which gave rise to considerable comment from shippers and other third parties. As we discuss in Chapter 5 of Volume 2, considerable efforts have been made by both BG and OFGAS to devise the operational basis necessary for the further development of competition in gas supply, without putting the safety and security of the system at risk. During the course of our inquiry, not only has the market continued to evolve, but so too has the debate on the complex technical issues associated with the transition from a fully integrated to a competitive gas supply system. We have taken the view that it is not appropriate for us to make detailed recommendations on a number of these technical issues, which can be better pursued by the Director only after the current uncertainties as to the structure of BG have been resolved. Resolution of these issues, however, will itself be affected by the recommendations of this report, and the decision as to how they will be implemented.

US and European developments

2.32. We received a considerable amount of information on recent and proposed changes in gas markets in the USA and elsewhere in the EC. In the USA, there is a high degree of competition between interstate pipeline operators, who have also been under pressure to withdraw from the sale of gas to end users. Competition to supply gas to end users tends to be confined to the largest industrial and commercial customers and most trading and distribution activities within each state have remained under integrated ownership. There are differences both in geography, and in the balance of supply and demand for gas between the two countries, but a number of recent developments in the USA (see, for example, paragraph 2.111, and paragraph 5.171 of Volume 2) provide a pointer to the scope for future developments in the UK gas market in the longer term. The EC Commission has recently introduced proposals to provide for third party access to the pipeline system and allow larger users to buy gas from suppliers anywhere in the EC, but with little immediate likelihood of being adopted.

The relevant markets

2.33. Unlike the Fair Trading Act references, the Gas Act references do not require us to consider whether any aspects of supply of gas to non-tariff users operate against the public interest; nor any aspect of supply of gas to tariff users other than the 'fixing of tariffs'. As will appear, however, much of the evidence and reasoning on supply of gas to end users is highly relevant to our conclusions on the matters specified under the Gas Act references. In particular the operation of transportation and storage has to be seen in the context of competition in the supply of gas to end users: how that competition has evolved to date, how it may be expected to evolve in future and the effects on users.

The non-tariff market

2.34. Although, as we discuss elsewhere, the distinction between non-tariff and tariff customers is now less clear than in the past and may, over time, cease to be of any relevance, we also have to distinguish between the non-tariff and tariff markets and, in so doing, as a starting point for discussion, to retain the former distinction in the Gas Act, between supply to premises of above 25,000 therms and below. Supply to premises using between 2,500 and 25,000 therms a year would now be classified as supply to 'non-tariff' users if BG chose to offer them 'special terms', or if they were supplied by competitors to BG. BG has to date not offered special terms to consumers in this size category, and continues to supply over 85 per cent of the market according to the published tariff, at prices still regulated by the Director. For the purposes of our

report, we have, therefore, regarded it as more sensible to regard all premises of between 2,500 and 25,000 therms a year as still part of the 'tariff market'.

2.35. As discussed, supply of gas to non-tariff customers was the subject of the MMC's previous report. In 1992 it accounted for about 35 per cent of the total volume of gas supplied by BG and others in Great Britain, some 29 per cent of gas sold by BG, 17 per cent of BG's revenue, and 16 per cent of BG's operating profit (excluding BG's revenue and profit from transportation of gas for third parties)-see Table 2.1.

Prices

2.36. The non-tariff market is discussed in detail in Chapter 3 of Volume 2. As shown in Table 3.5, between 1986/87 (when BG was privatized) and 1992, BG's average revenue per therm from contract sales fell by over 30 per cent in real terms (interruptible by 25 per cent, firm by 30 per cent; the decline in average revenue also reflects an increase in the share of interruptible gas over the period). In part this reflected falls in beach prices of gas of about 25 per cent, which accounted initially for about 70 per cent of contract prices: but much of the reduction results from a decline in the margin over gas costs. Nevertheless, there are still complaints by some users that gas prices are higher than for their European competitors. Prices are now based on published schedules, as recommended in the 1988 report, in order to eliminate discrimination. This did (as expected) produce winners and losers; some 60 per cent of customers were charged lower prices and only 20 per cent were subject to increases above the rate of inflation. There were some transitional problems, the schedules providing at one stage an incentive to use more gas to benefit from lower charges at higher volume levels, but most of these have now been resolved. BG is, therefore, no longer in a position to categorize customers according to the ease with which they could use alternative fuels and charge accordingly.

2.37. Prices vary according to volumes used: in 1992, for example, firm prices ranged from below 25p per therm (the three largest contracts, accounting for 10 per cent of firm non-tariff load) to 39p to 41p per therm (about one-half of contracts, but in total accounting for less than 10 per cent of firm non-tariff load), with an average of 31p per therm (see Table 3.6 of Volume 2 for details). Interruptible prices varied from below 16p to above 30p per therm, around an average of 19p. The schedules applicable for particular customers currently allow for aggregation of use across qualifying premises (prices being somewhat lower for customers with multiple premises as recommended in the 1988 report), but not for load factor (the variation in demand over the year) or location (such as distance from beach terminals).

Competition

2.38. It is clear that there is now more competition for non-tariff customers than at the time of the 1988 report. In 1988 virtually all supply was by BG. By the time of the OFT report in 1991, some 5 per cent of all supply to non-tariff customers by volume was by third parties. BG told us that by May 1993 this had increased to about one-third: about 55 per cent of firm gas supplied to non-tariff customers (again excluding power generation) was by companies other than BG, but all interruptible gas (some 40 per cent of the total non-tariff market as defined by volume) was still supplied by BG. Over 30 companies are now actively marketing gas. Competitors to BG include subsidiaries of oil and gas production companies, subsidiaries of regional electricity companies (RECs) and a number of independent businesses. There are an increasing number of companies involved in the buying and selling of gas, some of which are operating on a very small scale, including a further 70 companies which have received allocations in the release of gas by BG in 1993.

2.39. Competition is not, however, evenly distributed. We are not aware of any sales of interruptible gas by competitors. Competition for firm customers is strong for high load factor, medium-volume customers, but is weak for large-volume customers. As at February 1993, for example, competitors' market share was greatest, at some 60 per cent, for users of between 500,000 and 1 million therms of firm gas a year. It was below 30 per cent for the smallest non-tariff customers, users of between 25,000 and 50,000 therms of firm gas a year; and below 20 per cent for the largest users (excluding power generation), of between 10 million and 25 million therms of firm gas a year. The average load factor of the customers of independent shippers is some 65 per cent, compared with 47 per cent for BG's firm contract customers. There is less variation in the

extent of competition by region. The percentage of firm gas supplied by competitors (other than for power generation) varies from about 34 per cent of firm gas supplied by competitors to BG in North Thames and South Eastern to some 50 per cent in the West Midlands.

2.40. Competition in the firm contract market is still evolving rapidly: most of the competitors have only been selling gas to end users for less than two years. A number of shippers told us that they did not wish to supply the largest customers, owing to limited availability of gas, and their preference not to be dependent on a few large customers. The variation in market share mentioned above also reflects the nature and structure of BG's price schedules which do not fully take account of variations in all its transportation costs: by contrast its transportation charges, a main element of its competitors' costs, vary according to load factor and distance.

2.41. The development of present competition has been much assisted by the existence of BG's price schedules and by the undertakings given by BG to the OFT on release of gas and market share. It may also, however, to an extent reflect what BG would regard as its inability so far to incorporate more than a low ROR in its transportation charges. The vulnerability of the shippers is shown by comparing their gross margins, that is their selling prices less their costs of gas, with the transportation charges they pay to BG. The final selling prices to users of companies responding to our questionnaire (see Table 3.14 of Volume 2) averaged about 31.7p per therm; of this gas costs accounted for about 19.6p per therm with a gross margin of 12.1p per therm. Transportation costs represented on average about 8.4p per therm, nearly three-quarters of the available gross margin. The margins taken by independent shippers, therefore, averaged only some 3.6p per therm.

2.42. BG's competitors have effectively no option but to use its transportation network but, as shown by these figures, their viability depends both on their selling prices for gas, which can still be influenced by BG given its continuing market share, and their transportation costs determined directly by BG. BG itself regards the current level of transportation charges as too low and as under-recovering the costs of the low-pressure distribution system. As discussed in Chapter 5 of Volume 2, during our inquiry BG proposed eventual increases in transportation charges of about 18 per cent averaged over all shippers, and of up to 30 per cent for some individual shippers (although these increases were to be phased in over several years, and were subsequently postponed until October 1994). Charges could increase further if BG was allowed a higher ROR on transportation assets than previously permitted by OFGAS: see Table 5.9. Such higher charges, unless there were to be a corresponding increase in BG's own price schedules reflecting the additional cost of gas transported to its own customers, would seriously reduce the gross margins taken by its competitors. A change in the structure of BG's transportation charges could also affect the basis upon which competitors' prices had been set.

2.43. To date competition has brought benefits to most users, customers of BG's competitors quoting savings of about 10 per cent on average and of up to 20 per cent in some cases on BG's own prices. The replies to our questionnaire to shippers (see Tables 3.12 and 3.13 of Volume 2) suggest that prices offered by shippers are, on average, just over 10 per cent lower than those of BG. These savings in part reflect the level and structure of BG's transportation charges, as discussed in paragraph 2.40, but also reflect lower margins and efficiency gains, leading BG itself to examine the level of its overheads and its own pricing policy. The benefits could, however, rapidly be reduced or removed if BG were significantly to increase its transportation charges without corresponding increases in its own price schedules. It should be noted that some major users (for example, those using above 10 million therms a year and users of interruptible gas) claim not to have had any benefits from competition.

Profitability of supply to non-tariff customers

2.44. As shown in Table 2.2, on present methods of cost allocation, CCA RONA from firm contract sales has fallen from some 18.7 per cent in 1987/88 to 5.6 per cent in 1992, but is still somewhat higher than the regulated tariff business. Return on interruptible turnover has fallen from 19.8 per cent to 12.9 per cent. The profitability of BG's sales to the non-tariff sector has, therefore, fallen significantly since the time of the MMC's 1988 report, if a consistent cost allocation procedure is adopted.

Quality of service to non-tariff users

2.45. The quality of service provided by BG directly affects BG's own non-tariff customers, but the service provided by BG to shippers also affects the customers of BG's competitors. The great majority of non-tariff customers supplied directly by BG are either very satisfied or fairly satisfied with the service provided by BG, although 6 per cent of contract customers in one survey we saw were critical (see Table 10.18 of Volume 2). One source of criticism is the inflexibility in BG's terms, partly attributable, however, to the requirement to publish price schedules following the MMC's previous report. By contrast, we received strong criticisms of the service provided to shippers, which affected the service they could provide to their own customers, which we discuss in paragraph 2.96.

Main issues in the non-tariff market

2.46. As is clear from the above summary of recent developments, key aspects of the non-tariff market are significantly different from those applicable at the time of our previous report. Many of the adverse effects identified in our 1988 report have been addressed. BG prices and profitability have fallen. Following BG's recent undertakings to the DGFT, competitors now account for about 55 per cent of the firm contract market. They have yet to enter the interruptible market.

2.47. The introduction of competition has given non-tariff customers a wide choice of supplier, and the benefit of lower prices and more flexible contract terms, such as the duration of contracts. It has also stimulated BG to look at the scope to reduce its overhead costs in supplying the firm contract market. BG's flexibility in dealing with its customers has, however, been limited by the requirement that it price according to published price schedules, which its competitors are not required to do.

2.48. BG said that competition was now 'self-sustaining', and that the rapid growth of competition showed that barriers to entry to the market were now negligible even before transportation and storage has been established as a separate unit of BG, to the extent that some of the current constraints on BG could be relaxed.

2.49. We disagree with these views. The present situation is in many ways artificial since it is supported by market share restrictions and the gas release scheme, which are only temporary measures restricting BG's freedom to compete in order to allow competitors to become established and requiring BG to abstain from any active form of competition for non-tariff customers.

2.50. In our view, to bring into existence competition that will be genuinely self-sustaining requires a framework in which barriers to entry can be progressively lowered; and, secondly, measures to deal with the market power which BG as the incumbent enjoys at the outset. The MMC's previous recommendations on gas purchasing and the more recent gas release scheme have helped to overcome the barrier to entry that arose from BG's position as the dominant purchaser of gas: this is discussed further in paragraph 2.84. BG's undertakings to limit its market share have also helped to ensure access for competing suppliers to a wide range of customers. In the longer term, however, we would regard the ability of competitors to access the transportation network and other facilities such as storage on non-discriminatory terms (including, for example, the balancing regime adopted by BG to ensure adequate availability of gas in the system to meet demands) as essential if competition is to be sustained.

2.51. We return to this aspect of the public interest in the context of transportation and storage below.

Other issues in the non-tariff market

2.52. During our inquiry, a number of other issues were raised with us by third parties. So far as these are relevant to this report, they are discussed below.

2.53. Some of BG's own contract customers were more sceptical about the benefits of competition, and continued to express unease about the level of prices, and what they saw as BG's ability to increase prices in future, notwithstanding the fact that competition has brought benefits to parts of this market. The fact that competition for the largest firm customers is so limited, in part reflects the current low level of BG prices relative to its cost of gas. There is a risk that the restructuring of prices BG is considering, to reduce the current variation in margins between selling prices and gas cost, could, in the short term, be to the detriment of some customers. BG told us that this effect would be mitigated by limiting the increase in charges to any individual user. One option under consideration by BG is to limit the change to any user to 4 per cent in any year. In our view, extension of competition by removal of current barriers to entry already noted, including measures to ensure the neutrality of transportation and storage, is the best safeguard for those areas of the market where competition is currently limited. Simply to extend price control to this market, as suggested to us by some users, would introduce serious distortion to the gas market and prove incompatible with the development of competition.

2.54. There is currently no competition to BG in supply of interruptible gas. Arrangements for the supply of interruptible gas are also of relevance to transportation and storage. The use of storage facilities is one way of meeting variation in demand between seasons, and day-to-day variations over and above that which can be met from variations in supply at the beach. The other is by the supply of gas to large customers on an interruptible basis which can in effect be switched to the more weather-sensitive customers, in particular domestic users. The current lack of market mechanisms has the disadvantage that there is no adequate means of evaluating alternative methods of meeting peak demands, in particular whether there are alternatives to storage. This may result in higher costs and the adverse effects of higher prices to gas consumers generally, but the effect of developing market mechanisms is currently uncertain.

2.55. The main constraint on competitors supplying interruptible gas is its role in balancing supply and demand at peak periods: BG is, at present, the only supplier of gas to the domestic market, which has the greatest variance of demand over the year. Only BG, therefore, has, to date, been capable of obtaining the peak load balancing benefit from the sale of interruptible gas to this part of the market. Extending competition to the former tariff market, in particular any extension to the domestic market, will open the opportunity to competition in supplying interruptible gas, in order to meet the variation in demand from shippers supplying more weather-sensitive users. We would also expect competition to result in the introduction of differential pricing to end users: by time of year, or to reflect the balance of supply and demand for gas in particular peak periods. Such peak pricing to end users is the main means to ensure efficient use of gas at times of peak demand, against which seasonal supplies of gas, investment in storage facilities, or the use of interruptibility can be adjusted, so saving on facilities which may well be very expensive at the margin. BG's proposals for developing a 'peak' market in gas, whereby it would bid for peak gas from other shippers or large users, are a first step towards encouraging market mechanisms: among the objectives is that the value of peak gas be determined by the market, to stimulate developments of alternative sources of peak gas, and to improve BG's ability to evaluate alternative means of meeting peak demand, such as the appropriate investment in storage facilities. The effects of pursuing BG's proposals are, however, still uncertain.

The tariff market

2.56. We discuss the fixing of tariffs in paragraph 2.139 onwards. The tariff market (which, as a starting point for discussion, we have initially continued to regard as the entire market up to 25,000 therms) is normally thought of as the market for domestic users. As shown in Table 2.1, domestic users account for 85 per cent of gas supplied by BG to tariff customers, smaller industrial and commercial users accounting for the remainder. Over 95 per cent of supply to premises using below 2,500 therms a year is to domestic users of gas, of whom there are about 17.7 million in this size range, the remainder being to about 440,000 industrial and commercial customers. By contrast, about 85 per cent of supply to premises using between 2,500 and 25,000 therms a year is to some 210,000 industrial and commercial customers, the remainder being to some 65,000 domestic users.

2.57. As with the non-tariff market, the scope for competition in the tariff market and its effects on users is of direct relevance to our consideration of the operation of transportation and storage. Competition has,

since August 1992, been permitted above 2,500 therms. This accounts for almost 15 per cent of the former 'tariff market' and is predominantly supply to industrial and commercial users. Government policy is to extend competition to the remainder of the tariff market. We consider the scope for such a measure, and its implication for the operation of transportation and storage, further below.

Regulation and profitability

2.58. The main aspects of the tariff market include an evolving and increasingly tight system of price regulation. BG acknowledged that the first price regulation formula, for the period until 1 April 1992, of RPI-2 plus full pass-through of gas costs, resulted in a better than expected performance: the RPI-X regulatory system was intended to give an incentive to improve performance, the rewards for which would be passed on to users only in the long term. As shown in Table 2.2, the real return on CCA average net assets for tariff sales improved from 4.1 per cent in 1987/88 to 6.8 per cent in 1991, but fell to 4.9 per cent in 1992 on the present basis of cost allocation. The non-domestic tariff market (consisting predominantly of premises using over 2,500 therms a year) is more profitable than the domestic market: an ROR of 11.2 per cent in 1992, compared with 4.2 per cent for the domestic market, 4.9 per cent overall, the lower cost of supplying higher-volume customers not being fully reflected in prices. BG said that shareholders had done well from privatization during the initial period and that it had been able to use the cash flow from the gas supply business for its policy of diversification. The regulatory formula for the five-year period from April 1992 represents a significant tightening, to RPI-5 compared with the RPI-1 sought by BG. The current RPI-5 formula is discussed further in the context of the 'fixing of tariffs' in paragraphs 2.139 to 2.170.

Prices

2.59. As shown in Table 3.5 of Volume 2, income per therm from tariff sales fell by about 16 per cent in real terms from 1986/87, the year of privatization, to 1992. This reflects mainly the reduction in the costs of purchase of gas over that period which accounted in 1986/87 for about 40 per cent of gas prices, and declined by almost 25 per cent in real terms to 1992, but also the effects of the regulatory formula on allowable income (net of gas costs) which declined by about 10 per cent in real terms (see also Table 4.14 of Volume 2). There have been limited changes to the tariff structure over the period. Standing charges as well as commodity charges are now uniform, and there is a gradual tapering in tariffs for high-volume users, bringing them closer to the level of contract prices, as a means to reduce the incentive for large tariff customers to burn gas wastefully to gain access to cheaper contract prices available at higher consumption levels.

Quality of service to tariff customers

2.60. Quality of service is a central aspect of performance and of the value for money offered to customers. BG has long had a good reputation for safety and the engineering of the system about which, as at the time of our previous report, we have received very few complaints. Also of importance, however, is BG's relationship with its customers. The surveys we have seen suggest that most users now have a high perception of BG's quality of service for tariff customers, one MORI survey, for example, rating it at the top end of consumers' views of a number of public and private sector organizations, as did a more recent MORI survey for the Office of Electricity Regulation (OFFER) comparing customers views of the service provided by the privatized utilities. A recent MORI survey for the GCC found that 78 per cent of domestic users sampled rated BG's overall service as 'very good' or 'fairly good', 13 per cent as average, and only 3 per cent as 'poor' or 'very poor' (6 per cent answered 'don't know'). On the other hand, about 60 per cent believed it important to have a choice of supplier. The high regard for BG is, in our view, to the credit not only of BG, but also of OFGAS and the GCC in stimulating BG to improve its performance in this respect since privatization.

2.61. The Gas Act initially had limited provision for quality of service, but provided protection for BG's customers to the extent that the Director could use his enforcement powers to ensure that BG continued to give a gas supply to its tariff customers. The Authorisation provided further protection in a number of

service aspects, requiring BG to consult the Director about the nature of service available and consider any representation made by the Director. The Director subsequently sought to increase his powers in this respect, and recently agreed a modification of the Authorisation with BG to require it to set and publish key and established standards of service, and not to make any change in these standards without the Director's agreement. Additional powers to set performance standards were granted to the Director in the 1992 Act, although it is his current intention to set standards for 1993 by making a further modification to the Authorisation, rather than using the powers in the 1992 Act.

2.62. Failure to meet a range of quality of service indicators, developed between BG and OFGAS, could result in the reopening of the tariff formula. Sixteen key standards, linked directly to the tariff formula, were agreed for 1992 and these were supplemented by 14 additional established standards. These standards provide performance measures and targets for many aspects of BG's performance, particularly in the tariff market. Standards for 1993 are to be finalized shortly.

2.63. BG's performance against the key and established standards is good and improving in most areas. In all cases where quantified data are monitored, BG's performance is either above the standard set, or within 2 per cent of the target. The shortfall giving most rise to complaint is BG's failure to meet the standard related to making and keeping appointments.

2.64. A code of practice for service to older and disabled customers and a 'Gas Care' register of these customers have been established. We received a number of favourable comments about BG's approach to dealing with disadvantaged sections of society, including those who have difficulty paying their bills, and provision of subsidized services.

Competition to supply users of 2,500 to 25,000 therms a year

2.65. This market has only been open to competition since August 1992, but competitors already account for some 13 per cent of supply to users of between 2,500 and 25,000 therms a year, which BG projects will increase to 50 per cent by 1997. Although there has been a rapid initial increase in competitors' market share, it is too soon to assess how competition will develop, both in terms of market share and the profile of competition: for example, whether there are particular market sectors to which competitors will be most attracted.

2.66. Despite this initially rapid growth of competition to supply users of between 2,500 and 25,000 therms a year, competition in this sector of the market raises similar considerations to those we discussed in the context of the non-tariff market above 25,000 therms, and more acutely. BG's competitors remain totally dependent on BG's facilities for transportation of gas. As shown in Table 3.14 of Volume 2, transportation charges to shippers for supply to customers in this size range are greater than in the non-tariff market. The final selling price of sales to users of below 25,000 therms a year, of companies responding to our questionnaire, averaged about 36.5p per therm. Of this, gas costs averaged 19.9p per therm, with a gross margin of 16.6p per therm. Transportation costs represented 11.5p per therm. Shippers remain, therefore, highly vulnerable to changes in the level and structure of BG's transportation and storage charges, unless such charges are also reflected in BG's charges to its own customers, and to its terms and conditions for transportation and storage. As the size of supply falls the number of customers increases sharply: complaints about poor standard of service to shippers also partly resulted from BG's inability to cope with the growth of competition in this sector of the market. The concerns which we have set out in paragraph 2.50 in respect of the non-tariff market apply equally, therefore, to this sector.

The tariff monopoly

2.67. We discuss the tariff formula, in the context of the fixing of tariffs and related financial issues relevant also to transportation and storage, in paragraph 2.139 onwards. The main aspect of the tariff market raised with us by other parties concerned BG's current monopoly of supply to users of 2,500 therms or below. We regard this issue as of relevance in considering the Gas Act references on transportation and storage, in particular given the arguments expressed to us that any measures impacting on the transportation and storage system should take account of the timing of the eventual removal of the monopoly. The question of the removal of the monopoly, and its interrelationship with issues relating to transportation and storage, is of such potential importance that we feel they should be discussed fully in the Gas Act report.

2.68. BG's statutory monopoly remains in supply to premises of 2,500 therms a year or below, although it can waive these monopoly rights. In introducing the Competition and Service (Utilities) Bill in November 1991, the Secretary of State announced that, after a first reduction in the threshold to not less than 2,500 therms (as implemented in August 1992), the next step would be a review in 1996 to determine the date at which the monopoly will end, opening the rest of the market to competition. The date for that further review was subsequently brought forward to 1993. The DTI suggested to us that the next step would be abolition of the monopoly, the date for which could soon be decided. Many suppliers are clearly keen to enter this market, some of them suggesting that their entry into the UK market was largely based on the assumption that the domestic monopoly would be removed in the near future.

2.69. The reduction of the threshold to date, from 25,000 to 2,500 therms, has primarily affected non-domestic users, who account for 85 per cent of gas supplied in this sector: allowing competition for domestic users raises a number of important additional considerations. The vast majority of evidence from users and user bodies favoured retaining the existing monopoly in supply to domestic customers, given BG's generally good record. The few complaints we did receive from users concerned charges for new connections to the system, and promotion of energy efficiency, specific problems that OFGAS and the GCC seem well able to resolve. If the monopoly were removed, among the fears were that a 'free-for-all' could increase prices, lead to the introduction of cost-reflective prices, and the withdrawal of 'postalized' prices (charges unaffected by geographical location irrespective of any cost differences). There was also concern that there could be significant increases in charges to users of relatively small volumes of gas, such as the elderly, or reductions in quality of service. We recognize that, while the introduction of competition may well result in a fall in the overall level of prices, some groups may be worse off than at present.

2.70. Several shippers, especially those associated with the subsidiaries of the RECs, argued strongly for early liberalization, not only on the grounds that they could offer prices about 10 per cent or so below those of BG, but also because they felt that competition in gas supply generally could not be sustained if confined to the non-tariff market. The Director also saw scope to remove the monopoly (subject to a system of licensing suppliers to domestic markets) within a three- to five-year period. BG, on the other hand, argued strongly that the retention of the monopoly at the existing 2,500 therm level was in the public interest, though it did acknowledge that there may be scope to redefine the existing distinction between the tariff and non-tariff markets. The Chief Executive of BG stressed that BG had no wish to retain the monopoly for its own sake, but had real concerns about its ability, if the monopoly were abolished, to safeguard security of supply and to cope in such circumstances with all the problems arising from the need to balance supply and demand for gas.

2.71. We received a great deal of evidence on the existence and continuation of the tariff monopoly, an issue so important to our inquiry that we feel it necessary to express our views. Given the generally high quality of service offered by BG and the effectiveness of the regulatory system, we do not believe that BG's conduct in operating its monopoly of supply to the tariff market is against the public interest. On the other hand, the disadvantages of monopoly and the benefits of competition cannot be fully predictable: competitors could, for example, develop different product attributes-such as differentials between peak and off-peak tariffs-the scope for which BG now regards as limited. An important economic benefit of abolition of the monopoly in the longer term would be to bring cost-reflective prices, and of more efficient allocation of resources.

2.72. A major consideration is the implication of any removal of the monopoly below 2,500 therms, particularly in supply to domestic consumers, for safety, security of supply, and cost. The supply of gas presents certain problems which are different from those other commodities. As it was put to us by BG and others, the gas system (unlike electricity, for example) 'fails unsafe': without action to reduce consumption, too little gas in the pipeline on a particular day or over a particular period can reduce gas pressure to the point where air can enter the system, possibly resulting in an explosion. Interruption of supply may also result in pilot lights being extinguished, requiring all premises to be visited before supply can be restored. The actions of individual shippers or users can, therefore, have highly adverse consequences on other shippers or users of the system, if they result in greater demand for gas than the supply physically made available. The inability readily to disconnect the particular customers whose supplier runs out of gas-or to prevent those customers from still using gas-means that an individual supplier's failure to supply can have a wider impact on all users of the system. To avoid danger, other users' supply may have to be interrupted, or contingency measures may have to be taken, at some cost, to ensure that such a situation will not occur, for example by holding an additional stock of gas in storage. Supply to domestic users is no different from supply to industrial and commercial customers in this respect: but the potential problems are much increased by the large number of domestic users.

2.73. Against this background, we accept that a full degree of competition for all tariff customers would require safeguards to ensure that shippers have adequate gas available to handle peak demands in severe winters, or other measures to allow ready disconnection of customers if their suppliers had insufficient gas to meet their demand. Alternatively, safety of supply could be safeguarded by developing more advanced metering or information systems than are currently available, and the imposition of charges sufficient to deter a customer using gas if their shippers do not have gas available. Competition in this market, therefore, would require licensing of suppliers over and above the current obligation of authorized gas suppliers, to ensure standards including the imposition of obligations to ensure gas availability.

2.74. BG argued that competition would also increase gas costs (for example, by requiring additional storage of gas) to allow for greater risks in matching supply and demand. In our view, as long as competition was introduced in the manner and over the time-scale we suggest below, the longer-term benefits of competition on price and as an incentive to reduce costs would be likely to offset any price increase that may be necessary in the short term for such reasons.

2.75. A further consideration is the impact of competition on different sectors of the market, and on the structure of BG's prices. Although shippers were enthusiastic to become involved in supplying the full range of domestic customers, the impact of competition may vary for different sectors of the market. Both BG's figures and the shippers' estimates suggested that, on the present structure of costs and charges, the scope for undercutting BG may be mainly at the top end of the tariff market-the larger-volume users such as non-domestic users or larger households with central heating systems. It is this sector which is currently most profitable and likely to prove most contestable by other shippers with consequent benefit from lower charges. Table 4.11 of Volume 2, for example, suggests, on BG's own figures, and before allowing for the different costs which competitors may incur, scope for reductions in prices of between 8 and 10 per cent for users of between 1,500 and 2,500 therms a year.

2.76. BG's logical response to competition would be to rebalance its tariffs to reflect the structure of its costs and restore its profits, also reducing the scope for competitors to undercut BG. Supply to lower-volume users (whose use of gas may be confined to cookers or water heaters and who probably include a high proportion of elderly and poor customers) is currently unprofitable, and may require significant price increases. BG's figures (see again Table 4.11) suggest that charges to the 1.4 million users of below 100 therms a year could almost double; those to the further 1 million users of between 100 and 200 therms could increase by almost 40 per cent, and those to the further 1.4 million users of between 200 and 300 therms could increase by about 20 per cent. These estimates are based on the structure of transportation charges as proposed in the public consultation document, but also reflect BG's view as to the structure of its trading costs.

2.77. BG's estimates are uncertain: the actual impact on individual users would depend on the transportation charging structure that was adopted, in particular on the extent to which this varied between or within regions, and the method of charging for the local distribution system. It would also depend on whether the pricing structure of BG's competitors would be subject to regulatory constraints—for example, not to discriminate between users. In our view, a main and normal benefit of competition is to provide an incentive to relate the structure of prices to the structure of costs and to reduce the level of costs, and hence to reduce prices to users as a whole. Customers who might have to pay relatively more as a result of rebalancing could include users of small volumes of gas. The current 'postalization' of prices could end. We think it likely, therefore, that competition could result in price increases to some users in the shorter term, but this would itself encourage competition in the market. Competition could well, therefore, produce winners and losers in the short term, but with the prospect of increased efficiency and price reduction in the longer term.

2.78. BG also pointed to the need to reconcile competition with the social obligations currently imposed upon it, for example the treatment of customers who have difficulty paying their bills, or special treatment of the elderly. We accept that it would clearly be inequitable for BG alone to be subject to such obligations and difficult to sustain such obligations as competitors select the more profitable customers. Many of the shippers from which we heard, however, said that, if the domestic monopoly were removed, they would also be prepared to take on such social obligations, as a condition of their licence: they pointed out that their parent companies, some of the RECs, were already doing so.

2.79. Some shippers argued that removal of the tariff monopoly was a priority, of more importance than consideration of the ownership of BG's transportation and storage facilities. On the other hand, transportation and storage charges account, on BG's figures, for as much as 40 per cent of current charges to domestic users (see Table 4.12 of Volume 2). In our view, it is highly unlikely that effective competition in gas supply across the board could emerge as long as BG's trading activities were under the same ownership as the transportation and the storage system. It would be extremely difficult for BG to charge its own trading unit for transportation and storage on exactly the same basis as other shippers and impossible for it to be perceived to be doing so on a neutral basis. By imposing a high level of transportation charges, for example, BG could prevent other shippers competing, while the impact on its own trading activities will simply be balanced by the transfer of profit to its transportation activities. All the decisions taken by BG bearing on the conditions faced by shippers would be capable of favouring BG's own business.

2.80. We believe, therefore, that no decision as to the timing of so significant a step as removal of the monopoly should be taken except after the fullest consideration of the advantages and disadvantages of doing so and in the context of our various other recommendations, particularly in our report under the Fair Trading Act. We believe that the conditions necessary for competition to be permitted can be met. It may well be necessary to impose various legal obligations on all competitors, not only BG. This implies changes in the Gas Act to impose on competitors in the domestic market duties that go wider than those currently imposed on authorized gas suppliers, equivalent to some of the duties of the public gas supplier. It will also be necessary to benefit from experience of close monitoring of the balancing of supply and demand by competing shippers, including developments in information and control systems such as metering, and of the separation of transportation and storage from trading, which we regard as necessary for effective competition in all sectors of the market, before the date for removal of the monopoly is finally set.

2.81. There is still uncertainty, once the statutory monopoly had been removed, as to the extent of competition for large parts of the market. BG may, as it argued, continue to benefit from economies of scale in serving lower-volume customers, although some shippers believed that they could establish similar economies of scale by combining gas supply with other utility services. Even if BG were to retain a *de facto* monopoly, removal of the formal tariff monopoly, with tariff rebalancing by BG and the imposition of equal obligations (and quality standards) on all suppliers, would allow the division between the primarily competitive and the *de facto* monopoly sectors of the market to be established by the market on technical and economic considerations, rather than on the basis of the current unavoidably arbitrary and volumetric distinctions between users. This would maximize the benefits of competition, although there would, at least initially, be a continued need for regulation (including price control) in the *de facto* monopoly sector of lower-volume customers. When the Director was satisfied as to the strength of actual or potential competition in all sectors of the market, price regulation could be replaced by more general obligations, such

as an obligation to supply customers on the basis of published prices and the prevention of undue discrimination.

2.82. The date for removal of the monopoly should, therefore, depend, in our view, on legislative change, to impose obligations for safety and security of supply, and social obligations on all competitors in the market. It should also depend on experience of the monitoring of supply and demand by competing shippers in other sectors of the market, including developments of information and control systems such as metering, and of the operation of a separate transportation and storage business. The principal precondition for effective competition in all sectors of the market is, however, the neutrality of the transportation and storage system. The expectation that the tariff monopoly will in time be abolished would increase the need for the independence between BG's trading and its transportation and storage activities, although given the uncertainty over the date by which this should be done this is not a factor in our conclusion on this point. We would expect removal of the tariff monopoly some three to five years after implementation of the measures we refer to in paragraph 2.137 to ensure the full neutrality of BG's transportation and storage from its trading activities, with scope for an interim reduction to 1,500 therms in 1997.

Exploration and production and acquisition of gas

2.83. Various concerns were expressed to us about aspects of production and acquisition of gas which, it was argued, could adversely affect competition in supply of gas to users. These concerns relate mainly to the Fair Trading Act reference on supply of gas, where they are discussed at greater length, but also impact on various aspects of our consideration of the Gas Act references.

2.84. BG's position as a gas purchaser is different from the time of the previous MMC report, when it acquired virtually all gas produced in, or imported into, the UK. The MMC recommended that BG be required to contract for no more than 90 per cent of gas from new fields in the UK Continental Shelf. This policy was adopted broadly as the MMC recommended. The undertaking given to the Secretary of State required BG not to purchase more than 90 per cent of gas on offer to it, including gas imported from foreign sources. BG took the view that it should, nevertheless, not buy more than 90 per cent of any individual field. The undertakings were supplemented by 'swaps' of gas to be subsequently repaid to BG. The OFT estimated that, at the time of its report in September 1991, some 37 per cent of gas from new fields had been acquired by purchasers other than BG. This represented, however, only some 7 per cent of gas acquired for uses in the industrial and commercial contract market other than power generation, a development not foreseen at the time of the MMC's 1988 report, which was the basis of the OFT conclusion that the 90/10 scheme had not been successful. The current release programme requires BG to release stated minimum volumes of gas (at least 500 million therms in the gas years commencing in October 1992, 1993 and 1994, and at least 250 million therms in the year commencing 1 October 1995) and such additional quantities as are necessary to achieve the contract market share targets. BG estimated that competitors supplied around 40 per cent of the firm contract market above 25,000 therms (excluding power generation) in 1992/93, and that 77 per cent of their supply-30 per cent of the firm contract market as a whole-was from purchases of gas independent of BG.

2.85. One area of concern relating directly to transportation and storage were the links between E&P and the transportation and storage system, and cases where BG had refused to 'blend' gas or accept it on the transmission system. It is clearly important that there should be adequate provision in future to ensure that gas is accepted for transmission on reasonable and non-discriminatory terms.

2.86. Of indirect relevance to our consideration of transportation and storage was the concern that the development of competition in supply of gas, and hence any measures to ensure the continuing development of competition, could impact adversely on exploration and production. Some producers argued that uncertainty resulting from recent developments, or indeed our own inquiry, could adversely affect exploration and production. We noted the wide range of opinion from gas producers. Some producers felt that competition increased risk and would inhibit exploration and production, and were particularly apprehensive about significant restructuring of the industry. Other producers pointed to developments that would not have gone ahead if BG had remained the sole gas purchaser and some suggested highly radical and innovative approaches to the restructuring of BG. On balance, gas producers now seem prepared to be

actively involved in the development of a competitive gas market by selling substantial volumes of gas to shippers or direct to end users, and by reacting more flexibly to the more varied market that now exists. None of the proposals we put forward here, or in our report under the Fair Trading Act, should, in our view, adversely affect exploration and production.

Transportation and storage

2.87. The first of the Gas Act references requires us to consider the operation by BG of its pipeline system and other facilities used for the transportation and storage of gas. We are aware of only a few stretches of onshore gas pipelines in the UK owned by companies other than BG. Virtually all the parties from whom we heard accepted that the transportation of gas could be regarded as a natural monopoly which, due to its cost structure, can only be supplied by one firm, with relatively limited scope for competition. We did, however, receive evidence that there could be competition to provide storage facilities (see paragraph 5.107 of Volume 2).

2.88. The Gas Act provides for determination by the Director, in the event of dispute, of the terms on which transportation facilities are made available by BG. Since the MMC's 1988 report, the Director has intervened several times and this has involved one formal determination. The effect of his intervention has been:

- (a) to limit the ROR on assets included in BG's transportation charges;
- (b) to limit the charges for the use of the low-pressure distribution system-BG sought 5p per therm; the OFGAS determination implied a charge of 1p per therm; and
- (c) to influence other transportation terms, eg charges for the use of back-up gas.

2.89. OFGAS's intervention set a framework for negotiation between BG and shippers. In part as a result of this, transportation charges have fallen significantly since the time of our last report. BG's figures (in Appendix 5.1 in Volume 2) show that illustrative charges for transmission to customers on the regional transmission system have fallen by a third or more in real terms from September 1988; charges for transmission to users on the medium-pressure distribution system by about 20 per cent in real terms; and charges for transmission to users on low-pressure systems have halved in real terms.

2.90. The undertakings to the OFT introduced additional measures to ensure open access to BG's transportation and storage facilities. These are reproduced at Appendix 1.2 of Volume 2. In summary they involved:

- establishing a separate transportation and storage unit with separate accounting and charging;
- producing a discussion document outlining alternative pricing principles for gas transportation, together with a recommendation as to its preferred pricing approach (as was done);
- publishing a transparent pricing system for shippers other than BG, and subsequently for BG Trading, charges and other policies to apply 'equally and even-handedly' to BG Trading and shippers other than BG;
- publishing a discussion document outlining storage services;
- introducing non-discriminatory arrangements for gas conveyance, system reinforcements, customer and site connections and storage, including arrangements with BG Trading and other independent shippers and producers to obtain gas purchasing and nomination rights (though gas would not be purchased by the unit for resale to final customers);
- publishing separate audited accounts;

- endeavouring to reach agreement on the basis for regulation of the unit;
- agreeing information barriers with the OFT, and to receive from or provide information to the trading parts of BG on the same basis as for other shippers;
- providing quotations within five working days (for sites of over 25,000 therms), and within ten working days for smaller sites if appropriate (BG told us that this is not feasible without the proposed restructuring of charges); and
- providing quotations on a non-discriminatory basis.

These undertakings have formally lapsed but, as stated above, are referred to by BG as still its policy, and it has continued to discuss key elements with OFGAS, albeit with some slippage on the original timetable to the extent that many of the arrangements will not be in place by the time of our report. In our view, however, as we discuss in more detail in paragraphs 2.116 to 2.138, these undertakings would not be sufficient fully to remedy any adverse effects of the current arrangements.

2.91. Most of the shippers from which we heard said that adverse effects were currently occurring. Their complaints are summarized in Chapter 13 of Volume 3. As is apparent in Chapter 16 of Volume 3, BG denied many of the allegations of discrimination and most of the specific complaints forwarded to it. It argued further that when transportation and storage had been set up as a separate unit, and when proposed changes to the pricing structure and operation of transportation and storage were in place, BG's contract trading unit (BG CT) would be treated on the same basis as other shippers and many of the problems raised by shippers would be resolved.

2.92. BG acknowledged, however, some cases where errors had been made or its procedures had been inadequate. It acknowledged, for example, that problems had occurred in some cases in estimating the capacity available for its competitors when they have sought to supply customers previously supplied by BG. There had also been some delays in responding to requests for site works from shippers' customers, due to more lengthy chains of communication involved and the introduction of information barriers that hindered effective communication between the customer and the region. Such delays, it argued, would be avoided by its separation proposals and recent changes in its site works procedures. On the time taken to provide quotations and offers, BG told us that, until September 1992, it had largely achieved its commitment to provide quotations within 28 days. The reduction in the threshold for competition led to a dramatic increase in the number of quotations and nominations dealt with (from 20,000 in July 1992 to almost 150,000 in September), and a temporary deterioration in service levels. BG also acknowledged recent serious delays and errors in meter reading and communicating customer consumption data to shippers, owing to inadequate computer and manpower provision. This was also owing to its having underestimated the substantial increase in workload that occurred in the months following the reduction in August 1992 in the threshold for competition to 2,500 therms. Among other problems which it agreed had arisen were instances of BG Trading continuing to bill customers when they had transferred to other shippers.

2.93. BG admitted, therefore, that, following the reduction in the threshold for competition in August 1992, and the unexpected increase in workload that resulted, it had recently not provided the standard of service which shippers had a right to expect. Towards the end of our inquiry, shippers told us that the service provided by BG was still unsatisfactory in many respects.

2.94. Many of the problems raised by shippers would, if continued over a period of time, impact seriously on their competitive position, and, unless remedied, would clearly operate against the public interest. We accept that there were recently extenuating circumstances owing to the scale of new entry to supply users of between 2,500 and 25,000 therms, and that BG is making a determined effort to resolve many of these problems. The complaints of third parties are, however, indicative of what could be expected to occur in the absence of adequate arrangements to ensure the neutrality of transportation and storage as part of a business that also included trading, and evidence of the uncertainty in the minds of shippers as to the fairness and efficiency of the treatment they will receive from BG's transportation and storage activities. The remedying by BG of the particular problems that have occurred to date would not, in our view, by themselves, therefore, be sufficient to remedy an underlying problem arising from the joint ownership of

BG's trading and transportation facilities. This is essentially one of structure. The increase in competition that has already occurred is, itself, largely a result of the other constraints on BG (namely the requirement to publish price schedules, the market share targets, and the release programme) which have created the scope for competitors to gain business at the expense of BG, despite these problems with transportation arrangements.

BG's integrated business

2.95. BG operates an integrated business as both a trader and the owner of the transportation system over which its competitors must operate. We discussed in paragraphs 2.41 and 2.42 the vulnerability of BG's competitors to BG's transportation charges, resulting from the integrated nature of BG's business and their dependence on the transportation and storage facilities provided by BG: higher charges, such as those which BG itself has recently proposed, would undermine the margins taken by its competitors, unless there was to be a corresponding increase in BG's own price schedules.

2.96. BG is in a position not only to price competitors out of the market but to handicap their operation in many other ways, as indeed some shippers alleged it was currently doing. We referred in paragraphs 2.91 to 2.93 to the large volume of complaints we received that BG has not met the recent requirements of shippers. We have indicated in that context (paragraph 2.93) that BG admits not having recently provided the standard of service which shippers have a right to expect. Complaints have arisen in the context both of the original 'non-tariff' market over 25,000 therms, but also in the 2,500 to 25,000 therm sector of the market in which competition has more recently been allowed. They necessarily raise issues both of competition in these markets, and operation of the transportation and storage system.

2.97. Although we accept that this situation is partly explained by transitional operational problems that resulted from the lowering of the tariff threshold in August 1992, it does show how BG's performance of its transportation and storage function can itself act as a serious barrier to BG's competitors by disrupting the management of their businesses and preventing them from providing a high-quality service to their new customers. For example, delays in providing quotations and offers for transportation or in providing meter readings, the structure as well as the level of transportation charges, and the operational requirements imposed on shippers can seriously affect the shippers' ability to compete with BG (discussed further in the context of BG's own proposals in paragraphs 2.105 to 2.114). By contrast, we saw little evidence that BG's own contract customers suffered such quality of service problems.

2.98. The undertakings agreed with the OFT were an attempt to provide a basis on which the transportation and storage system would be available to independent shippers on fair and non-discriminatory terms. We received complaints that BG had not acted in accordance with the spirit of the undertakings and was 'not committed' to ensuring the establishment of competition. The Chief Executive of BG for his part emphasized to us that the Board was fully committed to bringing about competition. BG's agreement to lose market share represents an extraordinary and difficult position for any company to find itself in (although the gas sold by other shippers still has to be transported by BG), and we acknowledge that the task of evolving from an integrated gas supply business to one with a high degree of separation between trading and transportation is highly complex. Despite the difficulties facing BG, however, we believe that there is some validity to the criticism by shippers of its recent performance, as we discussed in paragraph 2.94.

2.99. More fundamentally, we believe that the present integrated nature of BG's business, in which it exclusively controls and provides the vital transportation facilities which its competitors have to use, is unable to provide the necessary conditions for self-sustaining competition. There is, in our view, an inherent conflict of interest between BG's duty to its shareholders of pursuing its own business interests of promoting its own profitability and market share, and its duty to its shipper customers which are also its competitors in its trading activities. The complex regulatory structure which we have outlined above (paragraphs 2.16 to 2.21), aspects of which apply to the non-tariff as well as to the tariff market, is consistent with the existence of such a conflict of interest and is a clear recognition of it. We have considered the undertakings to the OFT for operation of a separate transportation unit within the same company in this light. Our view, as we discuss further in paragraphs 2.115 to 2.138, is that these undertakings will not resolve the conflict of interest that arises from the integrated nature of BG's business: for example, the BG Board in exercising ultimate control over the transport company would continue to take into account the interests of BG's other businesses,

information barriers would prove insufficient and key decisions of the transportation unit would continue to be influenced by the interests of its trading business.

2.100. Competition in the non-tariff market and the tariff market above 2,500 therms cannot, therefore, in our view be fully effective or self-sustaining unless long-term arrangements can be put in place to secure the effective neutrality of the transportation system in such a way that this is in the interests of those who run it, and that such neutrality can be readily perceived by shippers which find themselves treated by BG as welcome customers of the system rather than simply as competitors in the supply of gas. The absence now of such a perception appears to us to be demonstrated by the volume of complaints to which we have referred (paragraph 2.96). The perception will not, in our view, be changed while the present fundamental conflict of interest continues; that is, while BG is both a trader and the owner of the transportation system over which its competitors must operate. As we argued above, the competition occurring to date has clearly been to the benefit of users, increasing choice, reducing prices and stimulating BG to lower its costs. We also see scope for competition in the longer term to stimulate innovation in service provision and pricing structure, in particular the development of greater differentiation between peak and off-peak pricing. Any weakening in competition or constraint on its further development would undermine these benefits, reducing choice and leading to a higher level of gas prices than would otherwise be the case. The emergence of competition has required the imposition of artificial targets for loss of market share by BG and the unnatural internal separation of the core transportation business from the related core business of trading. For competition to continue to develop and become self-sustaining, the present conflict of interest has to be addressed. Failure to provide the conditions for a fully competitive market, by failure to provide for the effective neutrality of the transportation and storage system backed by the appropriate motivation to attract customers, may, in our view, be expected to inhibit choice, restrict innovation in service provision and pricing structure, and lead to a higher level of gas prices to non-tariff users than would otherwise be the case. The benefits from maintaining the present integrated trading and transportation system do not, in our view, offset these expected adverse consequences.

Conclusions on transportation and storage

2.101. We referred above to the vulnerability of BG's competitors in the non-tariff market, both to BG's transportation charges and to other aspects of its operation of the transportation and storage system. This vulnerability results from the integrated nature of BG's business, BG as a trader owning the transportation system over which its competitors must operate. We referred to the inherent conflict of interest, as we saw it, between BG with a duty to its shareholders pursuing its own business interests, while also providing facilities to its competitors. In our view, competition cannot be fully effective or self-sustained unless long-term arrangements can be put in place to secure the effective neutrality of the transportation system in such a way that this is in the interests of those who run it and that such neutrality can be readily perceived by shippers. We found that competition has clearly been to the benefit of users, increasing choice, reducing prices and stimulating BG to lower its costs, but has required artificial stimuli to become established. As we stated, failure to provide the conditions for a fully competitive market, by failure to provide for the effective neutrality of the transportation and storage system backed by the appropriate motivation to attract customers, may be expected to inhibit choice, restrict innovation in service provision and pricing structure, and lead to a higher level of gas prices to non-tariff customers than would otherwise be the case. Similar considerations apply to the tariff market above 2,500 therms (paragraph 2.66).

2.102. Competition in the supply of gas requires that transportation and storage facilities should be available on non-discriminatory terms. Indeed, BG's original acceptance of the OFT undertakings suggests that it recognized the need for measures to ensure such a regime, which supports our view. The failure of BG to provide for effective neutrality of transportation and storage and its perception and the absence of provision for access to transportation and storage to shippers on non-discriminatory terms may, we consider, be expected to reduce the effectiveness of competition in the supply of gas and to undermine the benefits of the competition that has occurred to date.

2.103. In reaching our conclusion, we have considered the adverse effects specified by the Director (paragraph 2.3). We agree that the absence of provision for the establishment of an independent undertaking will give rise to conflicts of interest, as specified by the Director. We see the adverse effects as ultimately undermining the effectiveness of competition, and hence inhibiting choice, restricting innovation, and

leading to higher prices of gas than would otherwise be the case. It seems to us questionable whether the second adverse effect specified by the Director may correctly be identified in relation to the matter referred. We have not found it necessary to resolve this because, as appears from what follows, the point has limited practical consequences in the context of our report.

2.104. We have therefore concluded that BG's operation of its pipeline system and other facilities used for the conveyance and storage of gas as part of the gas supply business may be expected to operate against the public interest. The specific effects adverse to the public interest are that BG's operation of its trading and of its transportation and storage businesses as an integrated business may be expected to inhibit choice, restrict innovation and lead to higher levels of gas prices to users of over 2,500 therms a year than would otherwise be the case.

Other transportation and storage issues

2.105. A number of other issues about BG's transportation and storage activities were raised with us. As we have discussed, transportation is and will remain a natural monopoly, requiring, as acknowledged by BG, regulation both of the level and structure of charges, and of other aspects of its operation, in particular the balancing regime, which can impact significantly on competition between its users.

2.106. As stated in paragraph 2.90, the undertakings to the OFT required BG to endeavour to reach agreement on the basis for regulation of the transportation and storage unit. No formal regulatory system is now applied to transportation and storage, but shippers are entitled to request determination by OFGAS in the event of a dispute. Following one application by a shipper for a determination, OFGAS as part of an 'intended determination' referred to 4.5 per cent as an appropriate pre-tax current cost ROR on assets for third party transportation charges; although this particular dispute was settled without a formal determination, this return was subsequently adopted by BG in setting transportation charges. We discuss in paragraph 2.144 onwards the question of the appropriate ROR for transportation and storage in the context of the appropriate regulatory formulae. With the significant increase in the level of third party transportation, a more explicit means of regulation is necessary, to include charges to BG's current trading activities. BG proposed regulation of revenue from transportation and storage charges per therm transported by reference to an RPI-X formula, but with an adjustment for any significant differences between actual throughput and that assumed when the formula was set (see paragraph 8.26 of Volume 2), a suggestion broadly accepted by OFGAS. Such an approach would give the transportation and storage business the incentive to minimize costs and expand the system, while reducing the sensitivity of profits to unpredictable variations in demand resulting, for example, from weather. Connection charges would not be included in the formula-but would be subject to regulatory intervention in the event of dispute. BG's approach to the structure of the charging formula (but not for the level of charges, which we discuss in paragraph 2.169) would, in our view, seem appropriate, although further consideration could be given as to whether storage be included in the formula, or be subject to a separate but similar regulatory formula.

2.107. A number of shippers expressed concern to us about the excessive allocation of costs or assets to transportation and storage. There has not yet been any significant dispute between OFGAS and BG on this point, but as long as the businesses remain under common ownership there will be difficulty in establishing full transparency of the costs of operating the transportation and storage business.

2.108. We received a range of views about BG's proposed structure of costs and charges for transportation and storage, including an 'entry/exit' basis of charging, the appropriate means of charging for the local distribution system, and continuation of the current split of various charges between commodity and capacity elements on a 50:50 basis. BG regards the 'entry/exit' approach (see Appendix 5.3 of Volume 2) to charging as necessary if charges are to be applied to its trading activities on an even-handed basis, and if simplified procedures are to be introduced for making quotations and offers. Broadly, this scheme seemed acceptable to shippers which have so far entered the market and its early introduction would be welcome. There is still, however, a large element of subjective judgment in BG's methods for allocating both costs and charges to different categories of customer. Charges to shippers for use of the local distribution system may, for example, be somewhat too low; on the other hand, there may be a case for adjusting the structure of charges to impact more on capacity than commodity requirements in the longer term, which would reduce

charges to some shippers and their customers. BG and OFGAS are agreed on some of the main elements of BG's proposed charging structure, but, in our view, a transportation and storage company in separate ownership from the trading interests of BG has a far stronger incentive to reflect its costs in charges, the more so if price cap regulation remains in force.

2.109. A main concern of users was the significant increase in the level of transportation charges (of up to 30 per cent in the case of some shippers) which BG proposed during the course of the inquiry, although its implementation is to be postponed. A possible change in charges of such a scale in future shows the need, irrespective of ownership, for continued regulation of the charging structure, which should include a requirement on the transportation and storage unit not to discriminate unduly between shippers. It also shows the need for BG to provide more information, on a regular and more systematic basis, to users on the costs and bases of allocation underlying charges. As importantly, it confirms the need for transportation and storage charges to be seen as neutral in their impact on BG's current trading activities and those of its competitors. This requires the confidence that charges will equally affect BG and its competitors. Were this not to be so, the profits and viability of BG's competitors would be adversely affected. As long as BG's trading activities are under the same ownership as transportation, the effect of higher transportation charges is chiefly to transfer profit from trading to transportation, with no impact on its overall performance. More importantly, it reinforces BG's position as a dominant incumbent, leaving BG the option of accepting lower margins on trading, or more deliberately cross-subsidizing its trading activities from transportation in a way which it judges will inhibit challenge.

2.110. As discussed in Chapter 5 of Volume 2, establishing a separate transportation and storage unit requires a major revision to the operation of BG's gas supply system to allow competition in the supply of gas (and, where feasible, in other facilities such as storage or meter reading), without putting security of supply at risk, or requiring major expenditure to preserve security of supply. At a late stage of the inquiry, we received expressions of concern from shippers and OFGAS on BG's proposals for the continuing functional responsibility of transportation and storage for system balancing. In particular BG suggested a 'core:non-core' distinction between users, and rights for BG to renominate supplies to balance the system. These proposals are discussed in more detail in paragraphs 5.122 to 5.177; in principle, the core:non-core distinction attempts to resolve the problem that there is no feasible way for BG of monitoring the supply and demand of individual shippers or their customers, or of quickly stopping one shipper's customers from drawing on another shipper's gas. Hence BG initially proposed that shippers for core customers-those using less than 100,000 therms a year-would be required to use BG's transportation and storage facilities on a 'bundled' basis, subject to a joint charge, and deliver required volumes of gas. Shippers argued that these proposals would prevent them developing alternative and less costly storage facilities, and also give BG too much control over their supplies of gas, jeopardizing their competitiveness.

2.111. BG stressed that its proposed distinction between core and non-core users, of 100,000 therms, need only be a starting point and that its proposals would allow flexibility also for core users. BG agreed, for example, that if a shipper established that it could deliver more at the beach, it could choose not to take the seasonal storage allocated to it in respect of core load, or could resell or reassign the Rough capacity to BG's transportation and storage business. In our view, the proposed approach should allow more for the different capabilities of shippers or their customers, for example customers with dataloggers, and to ensure that there is no unreasonable inhibition on the development of new suppliers, in particular of storage and, where feasible, other balancing and transportation facilities. Our attention was drawn to the development in the USA of 'market hubs' and reselling of capacity through electronic bulletin boards (see paragraph 5.171 of Volume 2), which may form part of future development in the UK. Activities such as meter reading should also be subject to competition, where feasible, to increase the range and frequency of information relevant for balancing purposes. As long as transportation and storage remains under the same ownership as trading, BG is, in our view, unlikely to develop its approach constructively and neutrally, without damaging the prospects or confidence of independent suppliers.

2.112. We also received complaints that BG had acted anti-competitively against independent pipelines. BG said that it had not brought forward any pipeline schemes or reduced prices in response to competition: it explained one specific case put to us in which it had reduced prices at a time a new entrant was tendering for a contract, by reference to the general changes in its methodology for transportation charges at that time, in particular the introduction of an allowance for 'back-haul' (see also paragraph 16.285 of Volume 3). It

further argued that independent pipelines were uncompetitive, mainly due to the higher ROR required on investment. The evidence provided by BG suggests that its conduct could not be regarded as anti-competitive or against the public interest in this respect.

2.113. We were told, however, that procedures for BG to construct new pipelines were easier than for its competitors. BG told us that any delays in the planning or construction of pipelines, by, for example, any requirement that it adopt the procedures of the Pipelines Act, could inhibit its ability to meet its obligations as a public gas supplier. In our view, if independent pipeline operators are prepared to take on the same duties and obligations as BG, they should also have the same rights and privileges, and be subject to the same approval procedures for construction of pipelines as BG. We understand that this issue is under current consideration by Ministers (see paragraph 1.22 of Volume 2).

2.114. The concerns raised by shippers about BG's proposals in the areas outlined above confirm the need for modification of BG's Authorisation to provide enforceable requirements, building on the framework of the undertakings to the OFT and the subsequent discussion with OFGAS. They also, however, reinforce the need to ensure the neutrality of the transportation and storage system.

Remedies

2.115. We have concluded, in paragraph 2.104, that BG's operation of its pipeline system and other facilities for the conveyance and storage of gas may be expected to operate against the public interest, with the specific effects adverse to the public interest that BG's operation of its trading and of its transportation and storage businesses as an integrated business may be expected to inhibit choice, restrict innovation, and lead to higher levels of gas prices to users of over 2,500 therms a year than would otherwise be the case. We have, therefore, to consider whether the effects adverse to the public interest can be remedied or prevented by modifications of the conditions of BG's Authorisation, these being the only measures which it is open to the MMC to recommend, under the provisions of the Gas Act. In such consideration, therefore, we have to have regard to this last point and, further, in view of the failure by BG to provide for the effective neutrality of transportation and storage and its perception, referred to in paragraphs 2.101 and 2.102, to modifications (if any) of an organizational and structural nature.

BG's proposals for separate operation of transportation and storage

2.116. It is necessary for us to consider BG's own proposals on the lines agreed with the OFT, for establishment of transportation and storage as a separate unit of BG, and whether those are sufficient to allow effective and self-sustaining competition in gas supply. BG developed these proposals further during the course of the inquiry. It proposed establishing four separate units within the UK gas business still under the ownership of BG:

- the public gas supply activity, BG PGS, supplying gas to tariff customers;
- BG CT;
- appliance sales, installation, and maintenance; and
- BG T&S;

BG did not propose that these units would be separate subsidiary companies, but did not object in principle to their being so. It believed that this could require legislative change. Similarly, BG did not object to an amendment of its Authorisation to provide for the operation of a separate transportation and storage unit, although it did not accept that such modification of its Authorisation was necessary. The separation between tariff trading and contract trading within BG would, BG argued, be sufficient to avoid conflicts of interest, while keeping costs down and retaining for domestic users the benefits of 'one-stop shopping'-ie the availability to the public of a single telephone number able to respond to any emergency calls or enquiries relating to any aspect of gas supply. Except for retaining a degree of co-operation and co-ordination at the

district offices between BG PGS and BG T&S, BG T&S would be a separate free-standing business unit within the group, dealing at arm's length with the BG trading units and other shippers.

2.117. We put to BG the arguments of OFGAS and other parties from whom we received evidence (see, for example, Chapters 11 to 15 of Volume 3) that a separate transportation and storage unit, as long as it remained under the same ownership as BG's trading activities, would not be sufficient to ensure access to transportation and storage by all shippers on fair and non-discriminatory terms. Among the potential conflicts of interest argued by OFGAS and others were that, to serve the interests of its shareholders, the company would have incentives to give undue preference to its own supply business, and could discriminate in price and non-price terms against competitors; investment and other decisions would be distorted by the effect of competition on the supply business; cost allocation would be influenced by the perspective of the business as a whole; the Board and senior management would have access to information about BG's competitors; and the lack of confidence by shippers and users that the unit would operate even-handedly would itself adversely affect competition.

2.118. BG argued (see Chapter 16 of Volume 3) that BG T&S would not be in a position to give undue preference to its own supply business. A well-defined regulatory framework would be established to ensure that all shippers would be treated on an even-handed basis: any complaints about discriminatory treatment could be dealt with by the regulator. Matters such as cost allocation or pricing structure, for example, were also subject to discussion with OFGAS and could not, BG argued, prejudice other shippers.

2.119. BG argued that, with its businesses separate and free-standing, investment decisions would be taken on their own merits in relation to that business alone, subject also to earning a satisfactory ROR. Each of the units would have a separate Managing Director who would not be a Board member: in these circumstances, the Managing Director and managers in each business unit would be clearly responsible for the performance of the business unit in which they operate and there would be full allegiance to that business unit and a commitment to its success.

2.120. On information flows, BG argued that its proposals would ensure that BG CT would gain no competitive advantage from being owned by BG: information about individual competitors would be retained within each unit, and so too would much of the strategic information about the plans of each of the units. The management of each unit would have total responsibility for the unit and its profitability, without reference to other businesses or the corporate centre. The Managing Directors of the separate units would report to separate Board members; Gas Business projects which needed to be approved by BG's management executive would exclude sensitive information on prices and projected sales volumes growth by named shippers, and would not be available to the management of other regulated businesses; similarly, detailed budgets or budgeted information on any one regulated business would not be available to employees within another business. This type of structure, BG argued, would combine the required measure of control of the company's operation by the Board, while ensuring that the necessary information barriers (or 'Chinese walls') are installed and maintained between the businesses. The movement of individuals between jobs which involve knowledge of competition-sensitive information would also be limited.

2.121. We accept that BG has put considerable effort into formulating a framework for operation of a separate transportation and storage unit. Its proposed approach, notably to charging its own trading activities and competing shippers on an even-handed basis, and to the balancing of supply and demand by the separate transportation and storage unit, would represent a significant change from its operation as an integrated gas supply business.

2.122. In our view, BG's proposals for a separate transportation and storage unit under the same ownership as its trading activities may alleviate but cannot resolve the inherent conflict of interest that arises from BG T&S owning facilities on which independent shippers are fully dependent while competing with BG T&S's own parent company. This conflict of interest would be manifest in many ways. The BG Board would have to be involved in the strategy of BG T&S, and we find it inconceivable that it could do so without taking into account the interests of its other subsidiaries. Even without such an overt influence, the ultimate responsibility of BG T&S must be to the interests of BG as a whole.

2.123. 'Chinese walls' below the level of senior management are likely to be insufficient, particularly because they would obstruct flows of information that naturally occur and would continue to occur; hence

there would be pressure to circumvent them. They may in time be expected to prevent desirable information flows that would otherwise occur between independent businesses, complicating decision-taking and reducing efficiency. Moreover, the natural promotion of managers within a single integrated structure would itself involve over time the weakening of such barriers.

2.124. We further believe that the separation proposed would not be sufficient to allow the change in culture at all levels of BG T&S, which the Chief Executive acknowledged was necessary if there is to be even-handed treatment of BG's trading and contract activities and its competitors, particularly among middle managers used over many years to working together and giving priority to the interests of BG as a group. The problem would become particularly acute if, as we suggest above, there may in time be a further reduction in, or eventual removal of, the tariff monopoly which would threaten BG's core trading business.

2.125. We see a wide spectrum of decisions, for example matters of pricing, investment, cost allocation, and operation of the network such as the regime for balancing supply and demand, which involve large elements of judgment. As long as BG remains an integrated business, even if its units are run separately as BG has proposed, these decisions are likely to be influenced by the interests of BG Trading. There may be no overt or intentional discrimination. Such a situation is likely to involve constant appeals to the regulator, and lack of confidence on the part of both shippers and the regulator that decisions are being taken on an objective basis, rather than from the perspective of favouring BG's contract and trading interests. The regulatory uncertainty and instability of which BG and others have complained would be perpetuated.

2.126. BG's proposals rely on the role of the regulator to resolve disputes on such key issues. The regulator, by contrast, doubts his ability to carry out his duties adequately without separation of the ownership of trading from that of transportation and storage. In our view, greater ease and clarity of regulation is itself an important argument for adopting a fundamental structural remedy to the adverse effects identified, which result from the conflict of interest inherent under common ownership. Separation of ownership is important in terms of the generation of adequate information, both for shippers and the regulator, eliminating incentives to suppress and distort information relating to individual sectors. By separating ownership, the established boundaries of the businesses would also prevent any shifting of financial returns between sectors.

Proposed modifications

2.127. Earlier in this chapter, we noted that references, including as to transportation and storage, had also been made to the MMC under the Fair Trading Act. While, for reasons which we have explained in paragraph 2.6 above, we have considered the practical and sensible course to be the conduct of our investigations under all the references as one inquiry so far as is possible and legally permissible, we have, nevertheless, had careful regard to our duties under each individual reference and the statutory provisions which govern the approach to be adopted towards it. This latter point is, we consider, of particular relevance in considering whether the adverse effects which we have specified could be remedied or prevented by modifications of the conditions of BG's Authorisation.

2.128. In paragraphs 2.116 to 2.126 we have analysed and considered BG's proposals for the establishment of its trading activities and transportation and storage as separate units, but under common ownership. It is apparent (see, particularly, paragraphs 2.122 to 2.126) that we attach particular importance to these businesses coming under separate ownership. This result may be capable of being achieved by, with other powers, an order under the Fair Trading Act as we recommend in that report-see paragraph 2.137 below-although we do not know whether this recommendation will be adopted by the Secretary of State. We are, however, satisfied that it cannot be achieved by modifications of the conditions of BG's Authorisation which may be specified in this report. (That modifications of the conditions of BG's Authorisation may have a part to play in the exercise of such Fair Trading Act powers-under the Gas Act, section 27-is not relevant to our present consideration.)

2.129. It might be argued that, in consequence, having regard to the adverse effects which we have identified, it is not open to us to specify any modification of the conditions of BG's Authorisation, at least in the context of any degree of separation of these activities. We believe, however, that so to conclude would

be to look more narrowly at the question than we ought to do (see paragraph 2.127). Under the present reference (ie relating to transportation and storage), we must examine the choice of remedies according to the provisions of the Gas Act only.

2.130. In approaching this question, therefore, under the Gas Act, it seems to us correct, both as a matter of principle and in the present circumstances, to recommend, as an appropriate remedy to the adverse effects which we have specified, a requirement for BG's proposals, examined in paragraphs 2.116 to 2.126, to be adopted. (In the context of modifications of an organizational or structural nature, no other such requirement has occurred to us.) It would, it seems to us, be an unexpected result-and surely unintended by Parliament-if the inability to remedy adverse effects fully under the Gas Act precluded the adoption of such a remedy as its powers do permit. On this view, we note that BG's proposals involve a further degree of separation than exists at present; that, as we have mentioned (paragraph 2.116), they are on lines agreed with the OFT; and indeed we consider that they already go much of the way to separating the operation of transportation and storage from trading, without putting security of supply or safety at risk.

2.131. On this basis, we recommend that BG should be required, by modification of the conditions of its Authorisation, to establish its transportation and storage business, and its trading business, as separate units, with separate accounts, preferably by 31 December 1993, or as soon as feasible thereafter, but no later than 31 March 1994.

2.132. In the context of the above recommendation and of the approach discussed in paragraphs 2.128 to 2.130, we consider that the adverse effects which we have specified may also be remedied by the further modifications of the conditions of BG's Authorisation which we now specify.

2.133. As regards the organization of the separate unit for transportation and storage, which we have recommended in paragraph 2.131, requirements should be imposed to secure the 'ring-fencing' of a separate transportation and storage unit, including (but not limited to) requirements to:

- (a) create separate management structures and terms of employment and allocate employees (on a non-transferable basis) to transportation and storage;
- (b) physically separate to the maximum extent possible all common services, eg information technology systems, databases, treasury functions, career management, accounting and financial services, operational services and buildings at national, regional and district (including depot) level;
- (c) publish separate accounts to include as a minimum profit and loss accounts, balance sheets and cash flow statements;
- (d) have any contracts or agreements with the other parts of the business on fully arm's length bases with any cross-charging to be kept to a minimum; and
- (e) report to OFGAS should, in the view of the management of the transportation and storage business, the resources available to it be inadequate to discharge the statutory and other duties in respect of providing transportation and storage services.

2.134. In order that there should be a full provision of information, both as regards competitors and for regulatory purposes, by the transportation and storage business, following our above recommendations, modifications should provide for:

- (a) ensuring that any information supplied to the transportation and storage business should not be made available to or used by or to the advantage of the trading business. Appropriate arrangements should be made at Board level to safeguard the confidentiality of transportation and storage information which could be of advantage to the trading business;
- (b) requiring the transportation and storage business to publish regularly information on the costs of providing 'unbundled' transportation and storage services (subject only to the need to protect the

commercial interests of users of these services) and the methods by which such costs are translated into prices;

- (c) the provision of information to the Director, about the transportation and storage business, either by amending condition 7 of BG's Authorisation or by the creation of a new condition for the purpose; and
- (d) to require the transportation and storage business to participate in a representative forum for users of transportation and storage services to discuss matters of common interest, such as BG's investment programme, any research and development expenditure associated with transportation and storage, and BG's costs and charges.

2.135. A number of modifications of a more general character should also, in our view, be effected for the purpose described in paragraph 2.132. We specify these as follows:

- (a) regulating the charges of the transportation and storage business: in paragraph 2.106 we agreed in principle with regulation of transportation and storage according to an RPI-X formula, subject to a volume adjustment, but with consideration of whether there should be a separate formula for storage. We return in paragraph 2.169 to the factors which should be taken into account in setting such a formula;
- (b) requiring that the charging structure for transportation and storage and for balancing and other network operations be subject to the Director's approval, in the light of OFGAS's consultations and to ongoing regulation by him (it is, nevertheless, possible that, on further examination, once an overall charging structure had been approved by the Director, section 19 of the Gas Act might require amendments);
- (c) the placing of the transportation and storage business under a general requirement not to discriminate unduly between shippers;
- (d) to provide for local resolution of disputes concerning customers' entitlement to competitive supply above the monopoly threshold;
- (e) an obligation on the transportation and storage business through its system to facilitate access to independent storage or pipeline facilities on fair and reasonable terms. We suggest such a provision be supplemented by the Secretary of State taking measures to ensure that independent pipeline operators which become subject to the same or similar duties and obligations as BG should also have the same rights and privileges and be subject to the same procedures for approval of construction of new pipelines;
- (f) an obligation on the transportation and storage business to enable there to be competition in the provision and reading of meters in such a way as would safeguard the legitimate interests of the transportation and storage business, users and other shippers; and
- (g) the institution of quality of service standards for transportation and storage (like (b), above, this too might prove to require primary legislation).

2.136. Finally, we consider the following modifications necessary to the remedying of the adverse effects which we have identified, in view of the recommendation in paragraph 2.131: namely, to provide for such requirements on the transportation and storage business as are necessary to maintain security of the system and to balance supply and demand, while ensuring fair and non-discriminatory access to the system for all users. Such requirements should include as a minimum:

- (a) through appropriate contract provisions, to allow the transportation and storage business to acquire whatever information is necessary for purposes of monitoring security of supply (without prejudicing the confidential information of the traders) and balancing supply and demand for gas;

- (b) through appropriate contract provisions, to allow the transportation and storage business to nominate, renominate or interrupt receipt of supplies at terminals, or to interrupt supplies to customers as necessary to maintain security of supply;
- (c) to prevent the transportation and storage business from buying or selling gas except for system balancing and own-use purposes; and
- (d) to require the transportation and storage business to offer 'unbundled' transportation and storage services for supply to certain categories of users with reference to volume or factors such as whether users have metering equipment capable of giving daily readings; and through appropriate contract provisions to require shippers to demonstrate that they have adequate access to peak supplies or storage or are entitled to interrupt supplies to customers sufficient to ensure that each shipper can balance its expected supply and demand taking account of weather variations.

The Director may wish to consider whether these provisions, together with appropriate contract provisions, could initially be incorporated in a Network Code.

2.137. For completeness, we consider that we should refer briefly to the principal recommendation which we have made, in our Fair Trading Act report, to remedy similar adverse effects to those specified in paragraphs 2.104 and 2.115 above. This recommendation was that BG should be required to divest the ownership of its UK gas trading business. It may be noted that, by parity of reasoning with paragraph 2.129 above, we were concerned, as regards recommendations under the Fair Trading Act, with the wider remedial scope of that Act. In particular, such divestment would require the use of the order-making powers of the Fair Trading Act (sections 56, 89 and Schedule 8) and amendments to the Gas Act, to allow for the apportionment of the responsibilities of a public gas supplier between a separate trading business and a separate transportation and storage business. We anticipate that this might require the creation of new authorizations for the companies concerned and also that an order for divestment might involve consequential modifications of the conditions of BG's existing Authorisation (Gas Act, section 27).

2.138. In connection with the principal recommendation mentioned in the preceding paragraph, we have set out, in our Fair Trading Act report, a number of further recommendations, comprising measures preparatory to, and for the implementation of, the principal recommendation. Full details may be found in paragraphs 2.183 and 2.184 of Volume 1 of that report. In the context of the Fair Trading Act (see paragraph 2.128), some of these measures relate, wholly or partly, to the subject matter of modifications recommended in paragraphs 2.131 to 2.136. In some instances at least, these may be capable of being dealt with under the provisions of the Fair Trading Act. We consider, however, that the extent to which any remedies, which may have relevance to the requirements of both the Fair Trading and Gas Acts, may be dealt with concurrently, is primarily a question for consideration by and collaboration between the respective authorities concerned. These comments apply equally to the recommendations discussed in paragraphs 2.166 and 2.167.

The fixing of tariffs

2.139. In the second reference to us, we were asked to report on the fixing of tariffs for the supply of gas. The fixing of tariffs for supply by BG to users of 25,000 therms a year and below is currently governed by BG's Authorisation. We referred in paragraph 2.58 to the profitability of the tariff business over the period of the first tariff formula, of RPI-2, from the time of privatization in 1986 to 1992, and to the reduction in prices over that period.

2.140. As discussed in paragraphs 8.11 to 8.19 of Volume 2, the regulatory formula of RPI-5 for the five-year period from April 1992 (compared with the RPI-1 sought by BG) was designed by OFGAS to give a CCA ROR of between 5 and 7 per cent on the assets allocated to the tariff business (both the assets specifically related to tariff trading activities, but also the transportation and storage assets allocated to trading sales). This compared with the higher figure of 9.5 per cent return on assets sought by BG. The formula also included a more demanding treatment of gas costs in the price formula. Formerly these had been fully passed on to users, but allowable gas costs were now based on an index of factors determining gas costs rather than the costs actually incurred by BG, less 1 per cent a year (also see paragraph 4.56 of Volume

2), requiring BG to minimize the level of its gas costs. In setting the formula, OFGAS also assumed annual savings in non-gas costs of 2.4 per cent (compared with the 0.4 per cent a year which BG argued to OFGAS was the maximum attainable). Partly in response to the new regulatory formula, BG developed plans for reduction in staff numbers by some [*] (almost [*] per cent) over the next five years (see also Table 9.6), although in a more competitive environment it may well have come under pressure sooner to have improved efficiency to this degree, or even to a greater extent than it currently plans.

2.141. Given the past trend in tariffs, and the current and projected profitability of BG's tariff sales (see Chapter 8 of Volume 2), we see no evidence to suggest that, in the context of other regulatory developments, BG's charges can be regarded as too high. BG, on the other hand, argued that the tariff formula was too tight, following recent regulatory developments, and that a change in the structure of the formula was also necessary.

2.142. BG projects (see Table 8.3 of Volume 2) a decline in CCA ROR on the gas supply business as a whole to below 4 per cent by 1997, which it attributes to loss of share of the contract market and of the tariff market over 2,500 therms, and to a number of economic factors. RORs would be further reduced by any costs associated with the divestment of the trading business as we have recommended in our report under the Fair Trading Act. BG's projections also imply that the trading business could make a loss if its charges for use of the transportation system were based on the ROR currently adopted by BG. BG argued that it was necessary to amend the existing tariff formula from the present RPI-5 to RPI-1, but with pass-through of transportation and storage charges, and hence the formula would be applied to only about 20 per cent of the revenues of the trading activities. The overall level of transportation and storage charges should, in BG's view, be subject to a separate RPI-3 regulatory formula. In both cases, BG proposed that the formulae should apply from April 1992, requiring an increase in price above the present levels: see Appendix 8.6.

2.143. BG's argument has to be considered, in our view, in the context of other financial issues that arise in the inquiry, in particular the ROR appropriate for a separate transportation and storage business, relevant in the context of the separate regulation of such a business and in the context of our other recommendations for restructuring the business. Both BG and OFGAS indeed said that they were looking to the MMC to resolve BG's argument that the ROR currently underlying transportation charges was too low.

Financial considerations

2.144. In considering these issues, among the factors we should take into account is to ensure that BG's UK gas supply activities as a whole, or as separate companies after any divestment, can attract capital to finance new investment. This is relevant to the criteria for considering the public interest under section 4(1)(b) of the Gas Act. We also regard this as relevant to the references under the Fair Trading Act. Additionally, existing shareholders must be allowed a reasonable return on their investment in the company, but not an excessive return at the expense of the interests of consumers (a further criterion of the Gas Act). Any regulatory system must also continue to provide incentives to improved efficiency.

2.145. In our view, ROR is only one of a number of factors to be taken into account in considering an appropriate level of profitability or a future level of charges. The ROR arguments have to be considered both in relation to the cost of capital on new investment and returns on existing assets. It is also necessary to consider the appropriate value for assets to which the ROR should be applied, particularly when, as was the case with BG, the current cost book value of the assets was considerably greater than the price paid for the company by shareholders. The cash flows generated are equally relevant in considering financial viability.

2.146. The various arguments presented to us on ROR are summarized in Chapter 7 of Volume 2: it should be noted that the arguments have been expressed, following BG's accounting policies, in RORs on a CCA basis, which would be significantly greater on the HCA basis used by most UK companies. BG argued

*Figures omitted. See note on page iv.

that it requires a real pre-tax ROR¹ of 10.8 per cent on new investment in transportation and storage, representing its estimated cost of capital. Taking account of the divergence between the book value of its assets, and the shareholders' valuation of the company, BG argued that it required a CCA return of 6.7 per cent on existing assets, and that at a lower ROR it would significantly reduce investment. OFGAS, by contrast, previously suggested a CCA ROR of 4.5 per cent as appropriate for third party transportation charges, previously a relatively small part of the business and now of great importance, particularly in the context of any separation of transportation and storage from BG's trading activities. The present tariff formula was set by OFGAS on the basis of allowing BG a 5 to 7 per cent CCA ROR on the tariff business. During our inquiry, OFGAS initially argued for a 2.5 to 5 per cent CCA ROR on transportation and storage, and, after further research, reduced the proposal to a CCA ROR of between 2 and 4 per cent.

2.147. Both BG and OFGAS put forward well-researched and highly technical arguments in support of their positions on ROR. Both were intellectually respectable, but we find neither to be compelling. BG relied heavily on cost of capital calculations based on the Capital Asset Pricing Model (CAPM) approach, as, to a lesser extent, did OFGAS which also used comparisons with other companies' RORs. An important step in the calculation of cost of capital was the use of CAPM to derive BG's beta coefficient—the relationship of BG's risk to general market risk: see Appendix 7.2 of Volume 2. For this step, BG and OFGAS derived very similar values for beta and also agreed that the beta derived for BG as a whole was applicable to transportation and storage, which accounts for the bulk of the assets of BG. They did, however, adopt very different, but arguably equally valid, assumptions on some of the other elements used in calculating the cost of capital, namely the market ROR to which beta is to be applied, and the relation of this rate to risk-free debt. These are summarized in Appendices 7.2 and 7.3. It is necessary to forecast what BG will need in future to attract the necessary amount of capital: but in making such a forecast past experience is relevant. In looking at the market's historic return on equities, BG used a rate based on an arithmetic average (adding up RORs over n years and dividing by n). OFGAS used a rate based on a geometric average (multiplying past RORs over n years, and taking the n th root). Another area of debate was the period of time taken for averaging historic rates. BG used 1919 to 1991, OFGAS 1946 to 1991. There were other differences between BG and OFGAS in calculating the risk-free rates to be used, and in the calculation of the equity premium and the cost of equity. The disagreement between BG and OFGAS on these points shows that any assessment of the required ROR on new investment on this basis is unavoidably subjective in several key respects. The calculations are also sensitive to changes in economic conditions: interest rates, for example, fell significantly during the course of our inquiry, and there were also changes in the company taxation rates.

2.148. OFGAS additionally referred to returns earned by comparable industries, including regulated utilities overseas. We are doubtful about the validity of many of these comparisons: overseas utilities, for example, operate in a regulatory environment very different from that in the UK. We are, however, aware of other utilities in the UK which have regulatory formulae based on CCA returns on capital employed of 7 to 8 per cent or below (for example, BAA plc); we have noted that the public sector uses an expected real ROR of 6 per cent for non-trading activities, with 8 per cent as a required real ROR for nationalized industries and public sector trading activities; and the only available evidence for real returns in the economy generally in the UK currently suggests figures of about 8 per cent or less (see Table 7.7 of Volume 2). Some fund managers and pension funds provided information on the pre-tax real RORs to the shareholder which they looked for on their equity investments. The rates ranged between 6 and 8 per cent, with some funds expecting 1 per cent lower from privatized utilities.

2.149. As discussed in Chapter 7 of Volume 2, OFGAS and BG agreed on the need to allow for the difference between the amounts realized from the sale of BG and BG's CCA asset value at that time, and for subsequent discrepancies between the ratio of the stock market's valuation and CCA-based values, referred to in Chapter 7 as the market to assets ratio (MAR). The MAR was some 41 per cent at the date of privatization, some 62 per cent at the end of 1991, and 68 per cent at the end of 1992. If there was no allowance for the MAR, shareholders would enjoy significant and excessive gains at the expense of BG's customers. There is, however, no clear-cut way to allow for the MAR: indeed, there is necessarily circularity between what 'X' is permitted and stock market valuation of shares, which will reflect current and expected

¹ A 'real' ROR is one adjusted for inflation. A 'current cost' return is one adjusted for specific price changes using current cost accounting conventions.

profitability, including the effect of regulatory uncertainty. There can clearly be no absolute precision in deriving an appropriate MAR, which will be subject to the daily fluctuations of the stock market. On balance, an MAR of about 60 per cent would seem reasonable, allowing shareholders to retain many of the gains since privatization. This ratio is of course to be applied only to the return on existing assets: it does not affect the return on new investment. To assume, on the other hand, as OFGAS did at one point, that only transportation and storage assets were sold at less than CCA book value, but not BG's E&P activities, seems an arbitrary distinction. These difficulties can be lessened by putting emphasis on a forward-looking, cash-flow-oriented approach to setting 'X', but this approach has had a limited role in exchanges between OFGAS and BG, and, in its evidence to us, BG could not look beyond a five-year horizon, despite an average expected life of pipeline assets of nearly 50 years. In these circumstances, a great deal of judgment has to be exercised in coming to conclusions about 'X'.

2.150. As we note in paragraph 7.80 of Volume 2, for the purpose of assessing the appropriate level of the price cap, we have concentrated not only on whether the marginal rate of profit is sufficient to induce the desirable level of investment, during the period for which the price cap is set; but also on whether the projected cash flows are adequate to sustain the business.

2.151. Despite projections of return on the gas supply business as a whole falling below 4 per cent, BG's own projections suggested that expected cash flow is far from unhealthy over this period. As shown in Table 8.5 and Appendix 7.9 of Volume 2, requirements of the UK gas supply business to raise cash externally, even after allowing for a contribution to tax and dividends, amount to some £200 million in total over the next five years compared with total cash generated over the period of about £8 billion. Cash requirements over a five-year period could be a misleading indicator of financial needs if a significant tranche of investment was projected shortly thereafter. We, therefore, asked BG to describe the cash needs to maintain the business beyond that period, being particularly concerned about the level of replacement expenditure at that time. Such figures as we have seen do not suggest that any major increase in capital investment is necessary within 10 to 15 years, implying that the strong cash flow position will be maintained for the foreseeable future.

2.152. The cash requirements of the UK gas supply business suggest, therefore, that an ROR as high as that proposed by BG is not necessary to sustain the financial viability of the business. BG's proposals for amending the current regulatory formulae involve cash flows generated by the Gas Supply business increasing to about £[*] million a year by 1997 (after a contribution to BG's corporation tax and dividends), to be used in part to finance diversification in activities outside the UK (see Table 8.16 of Volume 2).

2.153. In our view, the cost of capital considerations summarized in paragraphs 2.147 and 2.148 suggest that a real return of between 6.5 and 7.5 per cent on new investment would be reasonable, under current conditions, to attract capital to the industry. We consider it appropriate that replacement expenditure should also earn the cost of capital. Allowing for the stock-market-to-asset ratio of about 60 per cent at the end of 1991 (see paragraph 2.149) implies a return on CCA assets as at the end of 1991 of between 4 and 4.5 per cent. BG's own cash flow projections also suggest that the ROR sought by BG is too high.

2.154. In conclusion, therefore, we regard the current ROR used in third party transportation charges (4.5 per cent) as a reasonable upper limit for the RONA at present held by transportation and storage. The realized average rate may be expected to increase as a result of continued investment (both capital and replacement expenditure) in the system which would need to earn the full ROR in the range of between 6.5 and 7.5 per cent under current conditions to attract capital. In the longer term, the MAR will for this reason cease to have effect. Such a development would require more dialogue between BG and OFGAS on the justification for the planned levels of investment in transportation and storage than has been the case in the past. Consideration should also be given to the provision of incentives for technical innovation in the transportation network and in storage (for example, in metering technology) that would promote competition in trading.

*Figure omitted. See note on page iv.

2.155. BG also argued that a trading business, in which capital employed is relatively low, required a sufficient margin, of about 3.5 per cent on turnover (equivalent to about 11 per cent on capital employed), in part to offset the 'price risk' of trading: such a return should also apply, it argued, within trading to the public gas supply business (the remaining monopoly element, of supply to users of below 2,500 therms a year). We do not believe that return on turnover (ROT) is an appropriate criterion for the trading business: there would still be substantial capital employed-fixed assets and working capital-in trading, and we doubt whether there are any appropriate comparators in assessing ROT for such a business. Nor do we believe that, before divestment, it is necessary for BG PGS on its own to earn any minimum ROR, particularly given the difficulty of cost allocation between BG PGS and the other trading businesses, for example in allocating gas costs between interruptible and domestic customers. We do not, therefore, believe or accept that any higher return on new investment, or on existing assets, is necessary for the trading business than for transportation and storage: our views on the appropriate ROR apply equally, therefore, to trading as to transportation and storage, and hence to the UK gas supply business as a whole.

The tariff formula

2.156. We referred in paragraph 2.142 to BG's financial projections. We accept that these are subject to considerable uncertainty: as shown in Table 8.3 of Volume 2, for example, the structure of transportation charges can significantly affect BG's profitability. We see no case for any adjustment of the formula at the present time for changes in external circumstances which represent normal business risks: nor do BG's projections indicate a need for any adjustment on the lines proposed by BG to sustain the financial viability of the business. Similarly, we see no reason for adjusting the tariff formula for the effects of change in BG's contract market share: BG is still projecting satisfactory profits on its contract trading activities (firm and interruptible), as shown in Appendix 8.1, and it is unreasonable that it should be compensated for its profitability falling because of competition. In our view, however, it is likely that the current tariff formula will, under the current circumstances, produce a RONA below the range we regard as reasonable, and hence adversely affect BG's ability to earn an ROR of between 6.5 and 7.5 per cent on new investment which we regard as necessary, under current conditions, to attract capital.

2.157. This shortfall can, in our view, partly be explained by the loss of contribution resulting from the loss of share in the tariff market, following the reduction in the monopoly threshold in August 1992. It was reasonable for BG, in accepting the tariff formula, to have had regard to the contribution from the tariff market of 25,000 therms and below as a whole, with its varying margins between larger and smaller users. Given the expectation now of an inadequate level of profitability, it would seem appropriate for the formula to be adjusted for loss of share of this sector of the market, given its higher contribution.

2.158. A second effect of loss of market share in supply to users of over 2,500 therms (where average revenues are relatively low) is to raise the average revenue from tariff customers supplied by BG, to above the level of the price cap, requiring a reduction in prices to the remaining tariff customers if the price cap is maintained unchanged (see paragraph 8.23 of Volume 2). Amending the formula and applying it only to supply to users of 2,500 therms a year and below could prevent this occurring.

2.159. We accept BG's argument that the extension of competition in this sector would also justify confining the scope of the formula to supply to users of 2,500 therms a year and below. BG retains a dominant share of this sector of the market, but we believe that the scope of the tariff formula could be reduced, particularly if the limit on BG's market share is redefined, as we have suggested in the Fair Trading Act report, to include this sector of the market. If this is done, the tariff formula should, in our view, be replaced by an extension to supply to users of 2,500 to 25,000 therms of the obligation on BG to charge on the basis of published price schedules, while also maintaining the existing obligation not to discriminate unduly between such users. The maintenance of price schedules, both in this sector of the market and in supply to users of over 25,000 therms, should itself be seen as a temporary measure: when, in the judgment of the Director, competition can be regarded as 'self-sustaining' and BG's position as no longer dominant, it would be preferable to rely on a general obligation not to discriminate unduly between users (as is currently incorporated in the Gas Act for supply to users of up to 25,000 therms a year).

2.160. We refer in our report under the Fair Trading Act to the costs of the restructuring we have recommended in that report (see paragraph 2.137 above), estimated by BG at up to £130 million a year by 1997. Such costs are uncertain, but represent a relatively limited proportion of the turnover of BG; we believe that they would be justified by the benefits of the restructuring we have recommended on the development of competition in the longer term. The imposition of such costs might, however, inevitably have an adverse effect on BG's future return and put at risk its requirement to attract capital to the industry. We return to this in paragraph 2.168.

2.161. BG also proposed a restructuring of the tariff formula to allow for the pass-through of transportation and storage costs, which would be subject to separate regulation. This would be necessary following any divestment as we have recommended in our report under the Fair Trading Act, but not, in our view, as long as trading remains under the same ownership as transportation and storage given the unavoidable degree of judgment in allocating costs and returns between activities. The appropriate profitability of the public gas supply business should, in our view, be further assessed by the regulator in the period before any such divestment, with a view to establishing a tariff formula to apply after separation. Were, however, progress to divestment to be more rapid than we have assumed, we would expect an earlier review by OFGAS of the tariff formula, with a view to ensuring adequate profitability of the public gas supply business, at the time of such a divestment.

2.162. BG proposed three other changes to the tariff formula: firstly the removal of the 'Z' factor in the gas costs index (GCI), which allows it to pass on increases in a GCI less 1 per cent a year. The adoption of a GCI and the existing 'Z' factor give BG a useful incentive to minimize gas costs. BG argued that the restriction on its market share gave it less scope to reduce the costs of gas purchase. Nevertheless, BG's new purchases of gas remain substantial and we would not wish to remove incentives provided by this element of the tariff formula. BG also argued for a change in the 'E' factor, whereby it is allowed to pass on approved expenditure in promoting energy efficiency. BG argued that the mechanisms of the existing 'E' factor required schemes to be approved both by OFGAS and by the Energy Savings Trust, an overly bureaucratic process in its view. We would, nevertheless, accept OFGAS's arguments that its statutory duties enable it to consider the wider interests of gas users: it would seem too early in the operation of the scheme to change the existing arrangements. Finally, BG proposed the addition of an 'S' term, to allow it to recover the annual costs of any improvements in quality of service required by or agreed with OFGAS. We acknowledge BG's concern that OFGAS could impose considerable additional quality of service obligations without allowing BG to recover the costs. OFGAS told us, however, that it would allow adjustments to the tariff formula for the costs of any additional such obligations, which would then be subsumed into the formula for subsequent years, providing BG with the incentive to reduce such costs. This would seem preferable to allowing continuous cost pass-through of such expenditure. We see, therefore, no reason at present for any such changes to these elements of the tariff formula.

Conclusions and recommendations on the fixing of tariffs

2.163. On the basis of the considerations discussed in the foregoing paragraphs, in particular paragraphs 2.156 to 2.159, it seems to us that the fixing of tariffs by BG within the constraint of the current regulatory formula may be expected to operate against the public interest following the reduction in the tariff threshold after the formula was announced. The specific effect adverse to the public interest is that the continued existence and application of the present tariff formula may, in our view, be expected to affect adversely the supply of capital to the industry, particularly for the financing of new investment.

2.164. While we believe this to be the potential effect of the application of the present tariff formula, we recognize that this is not the sole, or necessarily the most important, consideration. We have sought to consider generally the working of the formula and, in particular, the position of the tariff customer in relation to it and to any change which might be necessary in order to rectify the detriment to which we have drawn attention. Consumers clearly benefit from the price reductions required by the current formula, but at the cost of an unreasonably low prospective ROR to BG, and, in our view, a risk to further investment in the system. The changes we put forward below would still protect consumers, but reduce the risk of underinvestment. We believe, therefore, that our conclusions provide the appropriate balance between achieving low prices and the need to attract capital.

2.165. The current loss of market share above the 2,500 therm level is relatively limited, and BG's current financial performance remains satisfactory. We have found no evidence that the fixing of tariffs currently operates against the public interest. We have, however, concluded that the fixing of tariffs by BG may be expected to operate against the public interest, by reason of the future effects of the introduction of competition in supply to users of between 2,500 to 25,000 therms a year, subsequent to the introduction of the formula, which may, in our view, be expected adversely to affect the supply of capital to the industry particularly for the financing of new investment.

2.166. In our view, this adverse effect could be remedied by a modification of the conditions of BG's Authorisation, ie of the tariff formula in the Authorisation. As discussed also in paragraph 8.36 of Volume 2, if the scope of the formula is limited to supply to users of 2,500 therms a year and below, a modification of the formula from 1 April 1994 from RPI-5 to RPI-4 would generate a level of additional income similar to the loss of profit to BG from reducing the tariff threshold. We therefore recommend a modification of BG's Authorisation to amend the tariff formula to allow BG average charges to users of 2,500 therms a year and below to increase by no more than the change in the RPI less four percentage points-an amendment of the current RPI-5 formula to RPI-4-such a revision to apply to charges as from 1 April 1994.

2.167. It appears to us, however, that the limitation of the scope of the formula mentioned in the previous paragraph (and in paragraphs 2.158 and 2.159) can be achieved only by legislation (including, in that expression, an order by the Secretary of State, made by virtue of section 8A of the Gas Act, inserted by section 37 of the 1992 Act). As, therefore, different approaches are necessary to these two remedies, we hope that these will be able to be implemented in time for our recommendation to be operative from 1 April 1994.

2.168. We referred in paragraph 2.160 to the adverse consequences on BG's ability to raise capital of the costs of the restructuring of BG to which we have referred in paragraph 2.137. As long as there is any uncertainty as to whether some or all of our recommendations under either Act will be implemented, or as to their timing, we consider that it is not open to us formally to conclude that the tariff formula may be expected to operate against the public interest on such a contingent basis. The Director should, however, in our view, agree to adjust the tariff formula further to allow an appropriate proportion of the costs of such restructuring to be passed on to tariff users and to take account of such costs in setting a regulatory formula for transportation and storage. It would be for the Director to validate that no more than the necessary costs of restructuring had been incurred and would be passed on to users in this way.

Regulation of transportation and storage

2.169. As we stated in paragraph 2.135(a), provision will be necessary for a more explicit means of regulation of transportation and storage initially to include revenue from transfer charges to BG's trading activities, as long as the two businesses remain under common ownership, as well as subsequently (should our recommendations under the Fair Trading Act be accepted) when trading is separately owned. We support the implementation of BG's undertakings to the OFT, requiring charges to apply equally and even-handedly to BG Trading and other shippers, and progress towards adoption of an RPI-X system for transportation and storage. An appropriate charging formula should, in our view, be based on factors including the required ROR for new investment (in the present circumstances of between 6.5 and 7.5 per cent), the maximum reasonable ROR on existing assets, which we suggested above should initially be no greater than the 4.5 per cent currently used in third party transportation charges, the cash flows generated by the business and the incentive to promote efficiency and technical innovation.

2.170. We considered BG's proposals for a separate transportation and storage formula in the context also of its proposal for a revised tariff formula, including the pass-through of transportation and storage costs. We recommended above a much more limited adjustment of the tariff formula than proposed by BG, and do not accept BG's proposals for a transportation and storage formula which would result in an ROR higher than that we consider reasonable. We feel it inappropriate, however, to recommend any particular value of 'X' for transportation and storage. Financial projections for transportation and storage, summarized in Chapter 8 of Volume 2, necessarily reflect BG's assumptions, not least as to the allocation of costs and assets between its

activities and as to the structure of transportation charges by the end of this period. There are particular uncertainties in how the application of transportation charges to trading would work, since there has previously been no such charge, nor is there any agreement on a starting level of charges. BG's own views on these issues may well change in the light of the divestment of its trading activities which we have proposed. In our view, therefore, the appropriate formula for transportation and storage should continue to be discussed between BG and OFGAS, with a view to its determination by OFGAS to take effect not later than 1 October 1994.

The regulatory system

2.171. We feel it appropriate to comment on the criticisms put to us by BG and some other parties of the system of regulation. Criticisms included:

- (a) instability and uncertainty in the regulatory system, including the succession of regulatory changes over the last 18 months;
- (b) unsatisfactory overlap between the OFT, DTI and OFGAS;
- (c) inadequate procedure and processes for the management of regulation, including insufficient consultation, or information as to the reasons for decisions; and
- (d) the public perception of acrimonious relationships between OFGAS and BG.

2.172. On the other hand, BG itself acknowledged that, although OFGAS's style had not always been to BG's liking, OFGAS had been an effective regulator. We have indeed already noted in this report the benefits of its intervention over the level of transportation charges, and in the setting of the tariff formula and criteria for quality of service, together with the contribution which it has made to the debate on the highly technical issues of operating the transportation and storage network. The regulatory system established by the Gas Act is, in our view, fundamentally sound and the difficulties in the regulatory exchanges over the last two years are probably exceptional.

2.173. We believe that the adoption of our recommendations in our report under the Fair Trading Act would itself improve the regulatory environment; as discussed above, separation of ownership would improve the information available to OFGAS and remove the present conflict of interest which gives rise to much of the suspicion of shippers, and possibly OFGAS, about the motives of BG underlying its proposals for operation of transportation and storage. It is likely for the same reason that, while we would expect OFGAS to remain vigilant on behalf of consumers, the nature of OFGAS's work over forthcoming years would change. It would become increasingly involved in highly technical issues of regulation of the transportation and storage system that may merit a somewhat different approach from the confrontational stance sometimes adopted between the parties in the past and a closer co-ordination in exchange of information between them than has previously occurred. The complexity of the issues might also merit the employment by OFGAS of more in-house technical expertise rather than relying mainly on consultants' advice on such issues.

2.174. We were asked by BG and others to consider a number of detailed changes to the regulatory system set up by the Gas Act, including the introduction of an appeal procedure in respect of determinations by the Director and to provide greater procedural safeguards for the benefit of BG. The terms of reference which are capable of being provided by both the Fair Trading Act and the Gas Act for these inquiries do not lend themselves to an assessment of the way regulatory affairs are conducted. Any findings which we were to make relating to the industry would inevitably be considered as having relevance to other regulated industries. Such issues raise considerations of such importance that, if they are to be considered, we believe they should be dealt with in the context of suitably broad terms of reference which would allow a relevant body to consider them as they applied to all regulators and not simply a single example.

2.175. We do, however, believe that there is one important alteration that is required in respect of the powers of the Director. We believe that the opportunity should be taken in any revision of the Gas Act for

extending his powers so as to provide him with full concurrent jurisdiction with the DGFT in the contract market, over which the Director currently has no powers to make references to the MMC. The Director's powers over transportation and storage must inevitably involve him in issues which affect both the tariff and contract market, and indeed the distinction between these two markets may, over time, cease to be of any relevance. The current division of responsibility with the DGFT would, therefore, seem anomalous. Such a change would simply bring the powers of the Director into line with those of the regulators of telecommunications, electricity and the water industries. Neither the OFT nor BG had any objection in principle to such an extension of the Director's powers, though BG preferred to see it associated with other improvements in its procedures as mentioned above.

2.176. The remedies which we have recommended particularly in our report under the Fair Trading Act include establishing a neutral transportation system, and the new responsibilities which would, as a result, fall upon OFGAS would, in our view, encourage the emergence of a new working relationship, which may obviate the need for more formal changes in procedure that could reduce the effectiveness of the present regulatory system. We believe that it is important that OFGAS should ensure that there is an appropriate forum in which users of the transportation and storage facilities can be involved in discussion of matters of common interest, both with OFGAS itself and direct with BG T&S. As the market develops, and if BG is to be restructured as we have recommended, it would also be necessary to apportion the costs of OFGAS, currently substantially met by BG, equitably between the transportation and storage activities of BG, its former trading activities, and other users of the system.

Summary of conclusions and recommendations

2.177. We have concluded that:

- (a) As regards transportation and storage, BG's operation of its pipeline system and other facilities used for the conveyance and storage of gas as part of the gas supply business may be expected to operate against the public interest. The specific effects adverse to the public interest are that BG's operation of its trading and of its transportation and storage businesses as an integrated business may be expected to inhibit choice, restrict innovation, and lead to higher levels of gas prices to users of over 2,500 therms a year than would otherwise be the case (paragraph 2.104).
- (b) The fixing of tariffs by BG may be expected to operate against the public interest by adversely affecting the supply of capital to the industry, particularly for the financing of new investment (paragraph 2.165).

2.178. In order to remedy the adverse effects identified, we have recommended:

- (a) that BG be required, by modification of the conditions of its Authorisation, to establish its transportation and storage business, and its trading business, as separate units, with separate accounts preferably by 31 December 1993, but no later than 31 March 1994 (paragraph 2.131);
- (b) further modification of BG's Authorisation, specified in paragraphs 2.132 to 2.136, to ensure that transportation and storage be organized and operated as a separate unit, subject to a number of detailed regulatory provisions, including the requirements necessary to balance supply and demand; and
- (c) modification of the tariff formula, to allow charges to increase by no more than the change in RPI less 4 per cent: we have separately suggested that the scope of the tariff formula be limited to supply to users of 2,500 therms of gas a year and below (paragraph 2.166).

As explained in paragraphs 2.128 to 2.130, under the Gas Act references we can only recommend modifications of BG's Authorisation. We have made it clear in our report under the Fair Trading Act that separation of ownership is necessary, if the adverse effects we have identified are to be fully remedied. This cannot be brought about by modification of BG's Authorisation but in our report under the Fair Trading Act we have recommended divestment of BG's trading business.

2.179. Having regard to our discussion above, the following proposals on other aspects of current regulatory controls over BG are also put forward, leaving aside, however, some additional proposals made in our report on the Fair Trading Act references:

- (a) There should be a further reduction in the threshold of the monopoly, to 1,500 therms a year, at the end of the period of the existing tariff formula to widen the range of customers subject to competition. We would expect removal of the monopoly some three to five years after the divestment of BG's trading activities. The removal of the monopoly should also be subject to the imposition of duties similar to many of those of the public gas supplier on gas suppliers licensed to compete for supply to domestic users: this would also require legislative change (paragraph 2.82).
- (b) The Director should in our view agree to adjust the tariff formula further to allow an appropriate proportion of the net costs of the restructuring which we have recommended to be passed on to tariff users and take account of such costs in setting a regulatory formula for transportation and storage (paragraph 2.168).
- (c) The powers of OFGAS should be extended to give it full regulatory responsibilities, concurrent with the DGFT, for the contract market (paragraph 2.175).

The future for the industry

2.180. Throughout these inquiries, we have noted the emphasis placed by many witnesses and also by BG itself on the need for stability and certainty in the regulation of this important industry. We believe that it would be for the benefit of the industry, and for the public interest generally, if the recommendations finally adopted are carried out according to a firm timetable stated in the reasonably near future, so that all involved may be able to take the necessary steps and make their plans within a time-scale which allows adequately for the changes involved. It is important for the reasons stated in this paragraph that a time-scale for these various developments should be established and then adhered to. The timetable which we have already referred to above involves changes taking place at three periods of time:

- (a) in the short term, ie not later than 31 March 1994, the establishment of transportation and storage as a separate unit of BG, subject to amendment of the existing Authorisation; as from 1 April 1994, the revision of the current tariff formula; and by September 1994 the introduction of an RPI-X system of regulation for transportation and storage charges;
- (b) in the medium term, ie not later than 31 March 1997, the end of the present quinquennium, by when, in our report on the references under the Fair Trading Act, we recommend divestment of BG Trading (following necessary changes in the Gas Act) and reduction of the monopoly threshold to 1,500 therms; and
- (c) in the long term, some three to five years from 31 March 1997, by which time we would expect that the monopoly threshold will have been removed.

D G GOYDER (*Chairman*)

I S BARTER

M E BEESLEY

R O DAVIES

D P THOMSON

G WHITTINGTON

S N BURBRIDGE (*Secretary*)

30 July 1993