

**REVIEW OF ENERGY SOURCES
FOR POWER STATIONS
CONSULTATION DOCUMENT**

**RESPONSE BY
THE DIRECTOR GENERAL OF ELECTRICITY SUPPLY
AUGUST 1998**

INTRODUCTION

OFFER welcomes this opportunity to comment on the preliminary conclusions arising from the Government's Review of Energy Sources for Power Generation. (Consultation Document, DTI, 25 June 1998).

OFFER's principal concerns, which reflect the statutory duties of the DGES, are to ensure that customers are properly protected especially with respect to prices, and to promote competition in generation and supply. In this context, OFFER welcomes the Government's support for action to deal with problems in the electricity market, including by reform of electricity trading arrangements and the divestment of coal-fired plant by major generators. Action in these areas is important for creating a more competitive electricity market and for lower prices for customers. OFFER also welcomes the Government's commitment to competition in electricity supply, and to separate licensing of supply and distribution.

OFFER has concerns about the consequences for competition and for prices of the proposed policy of restricting new entry. These concerns were set out in OFFER's submission to the Review. This response argues that the construction of new gas-fired generation plant, to replace older coal-fired generation plant, is a rational response to environmental constraints and economic realities. The distortions in the market, while needing to be addressed, would not seem to justify a policy embodying a presumption against allowing new gas-fired plant. If such a policy is to be adopted, it would be helpful if it could be operated in a flexible way, and if an early opportunity could be taken to relax and then remove it.

The remainder of this response addresses the questions for consultation set out at the ends of Chapters 4 and 5 of the consultation document.

RESPONSES TO QUESTIONS ON CHAPTER 4: THE GOVERNMENT'S PRELIMINARY ASSESSMENT AND PROPOSALS FOR ACTION

Q.1 Do consultees agree that there are serious distortions in electricity markets which require urgent reform? Have they been correctly identified in paragraphs 7-11 of Chapter 4 of the Consultation Paper?

- 1.1 There are significant concerns related to the electricity market, principally about the market power of the major generators who initially owned all the coal-fired plant, and about the electricity Pool. Prices have been higher than they might have been in a more competitive market. Recent reports by OFFER (Report on Pool price increases in Winter 1997/98 and Review of Electricity Trading Arrangements: Proposals, published in June and July 1998, respectively) have confirmed the concerns about market power and the Pool. It is important that action be taken to deal with the associated distortions.
- 1.2 OFFER's submission to the Government's Review discussed in some detail the changes in generation fuel mix since Vesting, and the reasons for these changes. The higher prices may have encouraged new entrants to build gas-fired plant earlier than they might otherwise have done, in order to compete with the two largest incumbent generators. Problems with the Pool and the market structure, and the high prices arising in the market, have thus been among the factors encouraging the growth of gas in the electricity market at the expense of coal.
- 1.3 However, the more important factors explaining the significant changes in fuel mix that have been observed, and that are in prospect for the future, are the discontinuation of previous policies which constrained gas and protected coal; the increasingly tight emissions limits; and the favourable economics of investment in combined cycle gas turbines (CCGTs) compared to further investment in new or retrofitted coal plant. It may be helpful briefly to explain each of these factors.

Previous policies that protected coal

- 1.4 Before privatisation, the policy of the CEGB was to build coal and nuclear plant, even though CCGTs were becoming increasingly economic. There was also an EC prohibition on using gas in power stations. The three year "coal deal" at Vesting, followed by the subsequent five year coal-related contracts lasting to March 1998, seem likely to have kept the use of coal at a higher level than it otherwise would have been; certainly the contracts kept coal prices and electricity prices higher.

Tightening emission limits

- 1.5 For some years now there has been provision for tightening the limits on sulphur emissions at power stations, and an expectation that increasingly tight limits would severely reduce the amount of coal that could be burned in power stations. In consequence, existing generators and potential entrants, looking to the future, have focused on technologies and fuels that are not subject to environmental constraints of this kind.
- 1.6 In 1991, when National Power and PowerGen were floated, the sulphur emission limits were not binding on the companies. Nonetheless, the limits were scheduled to reduce by more than half within 10 years. Provision was made for retrofitting flue-gas-desulphurisation (FGD) equipment at Drax and Ratcliffe, so that the output of these stations did not contribute to sulphur emissions.
- 1.7 Over the next few years there was a significant reduction in the output of coal-fired power stations, reflecting primarily the construction of CCGTs but also the increased output of nuclear plant and interconnectors. In addition, the higher costs of running FGD plant relative to CCGT and non-FGD coal plant led to reductions in their load factors. Coal burn in England and Wales fell from about 77 million tonnes in 1991 to 46 million tonnes in 1996/97 and to 39 million tonnes in 1997/98.
- 1.8 The sulphur emission limits were tightened in 1996 when the present limits were put in place. As OFFER noted in its submission to the Review, these tighter limits imply coal burn (assuming predominantly UK coal and FGD plant running mid-merit) of about 28 million tonnes in 2001 and about 23 million tonnes in 2005.
- 1.9 Earlier this year, the Environment Agency published proposals to tighten the limits further by bringing forward the dates at which the above limits would need to be achieved. This would imply a maximum of about 28 million tonnes coal burn in 1999 and about 23 million tonnes in 2001.
- 1.10 There are possible ranges in these figures depending on the mixture of UK and imported coal and the load factors of FGD plant. Nevertheless, the prospect has been - and still is - that output from coal-fired plant would need to fall significantly over the medium term in order to meet environmental limits on sulphur emissions.

Economics of CCGT and FGD

- 1.11 It is often said that building CCGTs is more economic than building new coal plant, but that it would be more economic still to continue to run

existing coal plant. However, the foregoing summary shows that, if the appraisal is to extend beyond the very short-term, the tightening of emission limits means that the continuation of production from coal plants not fitted with FGD would soon be severely limited. An economic comparison has to envisage that continued operation of existing coal plant would require investment in retrofitting FGD equipment, together with such refurbishment as would be necessary to extend the life of the stations.

- 1.12 The major generators have taken the view that, on this basis, new CCGTs could be more economic than retrofitting FGD. For example, in the prospectus for the generators' flotation in 1991 PowerGen commented on the competitive advantage that new entrants building CCGTs might have, taking account of the capital costs which PowerGen would need to incur in its fossil fuelled plant in order to comply with environmental controls. In the 1995 prospectus for the sale of the Government's remaining shareholding, PowerGen commented that it might be more economic to close coal-fired plant than to install FGD equipment. National Power said in the same prospectus that it did not expect to install further FGD at coal-fired power stations, though FGD at more efficient oil-fired stations was a possible option, including in connection with conversion to orimulsion. Between them, the two major generators have constructed about as much CCGT capacity as all other generators combined, and have not retrofitted any further plants with FGD equipment.
- 1.13 The choice between CCGT and retrofitting FGD is still available today. Over the last few years the elements of the comparison have changed somewhat: coal has become cheaper but so too has gas, and the capital cost of CCGTs has fallen while their fuel efficiency has increased. The existing coal stations are now older and their operating costs if continued would be correspondingly higher and their reliability correspondingly less.
- 1.14 Information supplied by generators, consultants and informed commentators suggests that FGD would generally not be viable now at the less efficient coal stations, and in some cases would be precluded by lack of space. The discounted capital and operating costs of CCGTs and more efficient coal plants retrofitted with FGD are finely balanced. However, CCGT are more economic than retrofitting FGD once account is taken of the more flexible financial position of the new CCGTs, with their lower operating costs; the significantly greater value of CCGT plant after 10 to 15 years (the expected life of a retrofitted existing coal plant); and the savings from closing older less efficient plant, selling or reusing the site, and producing remaining output from newer more efficient plant. This also seems to have been the case in previous years.

Conclusion

- 1.15 The policy of tightening sulphur limits and the relative costs of alternative strategies for meeting these tighter limits have had an important impact on the policies of generators and on fuel mix. Neither National Power nor PowerGen has viewed further FGD installation as an economic option. They have had little incentive to attempt to protect the output of coal-fired plant, or to discourage the construction of CCGTs. They seem to have followed a strategy of profitable withdrawal, seeking and obtaining high prices for output from coal-fired plant over the remaining life allowed to it.
- 1.16 New entrants, for their part, have generally not been able to acquire coal-fired plant from the existing owners, and in any case have recognised that new CCGT plant is more economic in the medium to longer term given the sulphur emission limits.
- 1.17 In short, although high Pool prices may have encouraged some earlier entry of CCGTs, the past and prospective future level of investment in gas-fired plant is a rational response to environmental constraints and underlying economic realities.

Q.2 Is the agenda for action set out in paragraph 13 of Chapter 4 of the Consultation Paper appropriate to address these concerns?

- 2.1 OFFER strongly supports the elements of the Government policy identified in paragraph 13 of Chapter 4 of the consultation document.
- 2.2 OFFER has recently published its recommendations for reform of the wholesale electricity trading arrangements. It concludes, amongst other things, that more competition would result from bilateral trading replacing a uniform System Marginal Price, and that discrimination against fuel sources would be avoided by eliminating this basis of price setting and more explicitly acknowledging the value of flexible plant in a competitive market.
- 2.3 OFFER has recently published a report on increases in System Marginal Price in the Pool during the winter of 1997/98. This report concluded that the price movements demonstrated the unacceptable extent of market power by the two major generators, which was being exercised at the expense of customers, and also at the expense of coal as a fuel for electricity generation. It argued that there was a need to increase competition in the generation market, and that the most effective route in the short-term would be to transfer more of National Power's and PowerGen's coal-fired plant into the hands of competitors, who might be expected to use it more actively to compete.

- 2.4 OFFER, the Pool and the companies are pressing ahead with arrangements to allow competition in electricity supply for smaller customers. This is due to start in the first areas in September 1998. The market is scheduled to be fully open in all areas by mid-1999.
- 2.5 The Government's Green Paper on Utility Regulation proposes that new legislation should provide for the separate licensing of distribution and supply. OFFER supports this. It published a consultation paper in May on the steps which might be taken to secure a more effective separation of these two businesses. It argued that separate ownership of the monopoly distribution business and the competitive supply businesses would be the best route to resolving the problems for customers and competition posed by the present integrated nature of PES businesses.
- 2.6 The European Directive on the liberalisation of the electricity market is due to be implemented by most member states of the EU by February 1999. Relations with other member states are, of course, for Government. Any artificial restraint on imports from France across the interconnector would reduce competition in the England and Wales market, and might lead to higher prices.
- 2.7 There are no technical reasons why gas-fired generators should not provide system security and stability services such as flexibility of response, load following and frequency response. Coal-fired and gas-fired generators take commercial decisions on whether or not to offer such services. NGC presently signs ancillary service contracts for response and reserve, and this appears to be a competitive market. If there is a shortage of system service providers, then it should be possible to put in place appropriate commercial incentives on generators to make these services available. The proposals for new trading arrangements involve setting up a balancing market, in which services such as flexibility of response will be appropriately rewarded. It would be sensible to take forward other aspects, such as frequency response services, in the context of the Merz and McLellan recommendations, which are discussed below.
- 2.8 The DGES will continue to advise and work with the Government in these areas.

Q.3 Are the Government's conclusions on sustainability set out in paragraphs 15-19 of Chapter 4 correct?

- 3.1 OFFER will continue to facilitate Government policies with respect to renewable energy, and is in course of dealing with NFFO5 applications. It has recently put in place energy efficiency standards of performance for PESs for a further two-year period, and has taken steps to facilitate CHP plant.

3.2 The Government's environmental objectives for the electricity industry will need to take account of the significantly higher costs of renewable energy, which will have implications for prices to customers. As noted above, the construction of new CCGTs is generally a more economic way of reducing sulphur emissions than retro-fitting FGD to existing coal-fired stations.

Q.4 Do consultees agree that a significant further growth of gas-fired generation could prejudice the objective of diversity and security of supply, and that market distortions are a cause of this?

4.1 OFFER's submission to the Review noted that it seemed unlikely that gas would account for anything like as high a market share over the next five years as the 72 per cent of the market accounted for by coal as recently as 1989/90. Projections of a very high (for example, over 75 per cent) dependence on gas in, say, 20 years' time typically depend upon assumptions that the circumstances and relative costs and prices which have led to growing use of gas in electricity generation in the past few years will continue unchanged. It is, however, very difficult to assess the scope for and implications of economic and technical change over such a long period. There might well be changes in fuel costs or technology or environmental constraints which change the relative costs of different generation options. This could apply to options for new power plant and for keeping existing plant in operation. Moreover, permitting the construction of gas-fired stations now does not necessarily imply high levels of gas dependence in the future, if other more economic options emerge. The market can be expected to identify the most economic options at any particular time.

4.2 OFFER's submission to the Review concluded that there were no insuperable problems for security of supply arising from gas being the single most important fuel for electricity generation. Gas is available from a wide variety of sources on the UKCS, and from Norway and elsewhere, under a range of commercial terms. The report to the Government by Merz and McLellan concludes that there are no overriding technical problems in respect of the security and stability of the England and Wales electricity grid system arising from a possible 60 per cent level of gas-fired generation circa 2010, and even from a 90 per cent level circa 2020. Any deficiencies in market and other arrangements can be remedied.

4.3 Assuming that environmental implications are dealt with, a significant further growth of gas-fired generation would not be caused primarily by the market distortions hitherto identified. As explained earlier, although steps need to be taken with respect to the Pool and market structure, an increase in gas-fired generation represents a rational response to economic realities and environmental constraints.

4.4 It is not clear therefore that there would be a significant further growth of gas-fired generation to the level conjectured, or that such growth would prejudice the objective of diversity and security of supply. An increase in gas-fired generation is unlikely to be caused by market distortions.

Q.5 Should the Merz and McLellan recommendations be accepted, as the Government proposes? In particular, should the policy on CCGT back-up fuel stocks be reviewed?

Q.6 What process would be best for pursuing the Merz and McLellan recommendations? How should any steering group be constituted and what should its membership be?

5.1 The Merz and McLellan recommendations would seem to be a sensible framework for considering the technical, commercial and regulatory issues affecting security of supply in a system in which gas is the major fuel for generation. There are already well defined responsibilities in many of the areas identified. Some have been looked at as part of the Review of Electricity Trading Arrangements and would be appropriate for the proposed Development and Implementation Steering Group (DISG) to consider further. Many raise matters which actually or potentially are within the scope of licences, and thus within the responsibilities of the gas or electricity Regulators.

5.2 The following table sets out possible responsibilities for carrying the work forward:

RECOMMENDATION	LEAD RESPONSIBILITY	OTHER PARTIES INVOLVED
a) Review conditions which have led to CCGT plant being declared inflexible.	Pool.	NGC through Grid Code procedures. OFFER. DISG
b) Review Grid Code, ancillary service agreements and the Pool rules to ensure system security and stability services available.	NGC through Grid Code procedures and Ancillary Services Agreements. Pool.	OFFER. DISG
c) Review technical and commercial arrangements to ensure availability of plant with load-following capability; and with frequency response capability; and availability of gas.	NGC through Grid Code procedures, and Ancillary Services Agreements Pool. Ofgas on availability of gas.	OFFER. DISG
d) Demonstrate capability of CCGT generating plant to offer frequency response and load-following services.	NGC through Grid Code procedures.	OFFER.
e) Review arrangements governing provision and remuneration of reactive power services.	NGC through Grid Code procedures and Ancillary Services Agreements.	OFFER.
f) Review allocation of costs of Grid system reinforcements and locational incentives for siting of generation.	OFFER through NGC Transmission Price Control Review scheduled for 2001.	NGC.
g) Review how costs of major reinforcements of NTS network are to be allocated.	Ofgas.	Transco.
h) Review technical standards on amount of generating plant served by NTS spur pipelines.	Transco through Network Code procedures.	Ofgas.
i) Review information flows between Grid system operator, RECs and the operators of CHP and embedded power plant.	NGC and RECs through Grid Code and Distribution Code procedures.	OFFER. DISG Generators.
j) Review nature and timing of information flow between gas and electricity market operators and NTS and NGC.	NGC.	Ofgas. OFFER Transco. DISG
k) Review arrangements on availability and endurance of CCGT generating plants to operate on back-up fuel.	DTI.	Generators. OFFER
l) Review interruptible and firm gas supply contracts to accommodate significant amounts of gas-fired generation held in reserve.	Ofgas.	Gas Suppliers. Generators.
m) Review role of pumped storage and interconnectors.	OFFER.	NGC. Generators

- 5.3 It would seem sensible to establish a group to oversee this work. Since both gas and electricity issues are involved, the group might be chaired jointly by OFFER and Ofgas, who might report periodically to Ministers on progress. The group might contain representatives of NGC and Transco, and of generators, suppliers and customers.
- 5.4 OFFER's submission to the Review suggested that the Government might consider imposing requirements on gas-fired stations with respect to endurance, particularly in the event of gas interruptions. Any new arrangements should leave generators freedom to achieve any new targets in the most economic way in the particular circumstances of the generating plant in question.

RESPONSES TO QUESTIONS ON CHAPTER 5: THE GOVERNMENT'S PROPOSALS ON POWER STATION CONSENTS AND RELATED MATTERS

Q.7 Do consultees agree that the Government should act to protect diversity and security of supply while market distortions are being addressed?

Q.8 Do consultees agree with the arrangements for determining the duration of the proposed policy (paragraph 2)?

7.1 OFFER agrees with the Government about the need to tackle a number of electricity market issues, including reform of electricity trading arrangements and disposal of plant by major generators, separation of distribution and supply, and the introduction of competition and choice for all electricity customers.

7.2 It should be possible to make early progress on most, if not all, of the competition matters to which the Government attaches importance. Voluntary disposal of plant by major generators could be capable of being concluded by about the end of financial year 1998/99. By this time also competition in supply will have started in all PES areas; and the outline of new trading arrangements should have been agreed. During the course of 1999, competition in supply will become available for all remaining customers, progress on new trading arrangements should advance significantly, detailed requirements regarding separation of supply and distribution should become clear, and any outstanding security and stability issues should have been dealt with. By about April 2000, it should be possible for new trading arrangements to start operation, and for measures to separate the management and organisation of PES supply and distribution to come into effect, although revised legislation for separate licensing may not be in force until mid 2000. Thus, there is every prospect that within two years from now the main changes which the Government has set out can be accomplished.

- 7.3 By comparison, new CCGT capacity is unlikely to be able to come on stream for two years or more following Section 36 consent. Refusing consents now could therefore preclude all fuels from competing without restriction in two years' time.
- 7.4 It seems unlikely that the older and less economic coal-fired power stations that might close in the next few years would be viable in the longer term. The opportunity for UK deep mined coal to compete and the extent of UK deep-mined capacity should not depend on these particular plants. The need for a moratorium is therefore unclear.
- 7.5 As explained in the previous submission, a policy of restraining further growth in gas-fired generation is likely to lead to higher prices to customers by preventing economic investment in new plant and restricting the scope for new entrants to challenge incumbent generators. It is likely to have an adverse effect on competition in supply, by reducing opportunities for new entrants in supply to conclude new contracts with generators, and reducing diversity and choice in the contracts market. It could reduce security of supply. For as long as the policy operates, it will remove the most economic option for reducing sulphur emissions from power stations.
- 7.6 In the light of these considerations, it is not clear that the reasons for restricting new entry to the market will apply for more than a very short period. The policy of restricting new entry is now, and will remain, the main obstacle to a more competitive market. It would be appropriate to review the policy, with a view to relaxing it, at an early opportunity.
- 7.7 The DGES will, as the consultation paper suggests, keep the Government informed of progress on these matters. He anticipates making the first such report by the end of the year.
- Q.9 Should new natural gas-fired generation projects normally be treated as inconsistent with the Government's policy during the period while market distortions are being addressed (paragraph 4a)?**
- 9.1 Government policy with respect to consents for new power stations should be operated in a flexible fashion and with regard to the circumstances of individual cases. In addition to the criteria proposed, the Secretary of State should have appropriate regard to his statutory duties under the Electricity Act to promote competition and protect customers with respect to price. A number of types of new natural gas-fired projects should be treated as consistent with the Government's policy, as suggested below.

Q.10 Should appropriate combined heat and power projects be treated as consistent with the Government's policy? Do consultees agree with the proposed approach to defining such projects (paragraph 4b)?

10.1 OFFER supports the proposed exemption for CHP projects. Apart from one very large scheme with a CHP component, about half a dozen schemes with CHP capacity totalling about 1900 MW have applied for but not yet received Section 36 consent. The schemes range from about 50 MW to 240 MW in size.

10.2 The policy needs to recognise that the particular circumstances of individual CHP projects can vary widely. In some cases, for example, the heat load can only be built up in phases, as heat users locate to sites close to the producer. In other cases, the ability to produce and sell electricity beyond the needs of on-site or nearby consumers is essential for the viability of the project. The proposals on electricity trading arrangements note that, in view of the increased importance attached to flexibility and control of output, it might be more economic to engineer CHP and on-site plants to a larger capacity than the on-site load. This would give their operators greater control over decisions to sell the output into the market. Limiting consents to projects which meet only on-site or nearby heat and electricity requirements may prevent the construction of economic schemes which can contribute usefully to diversity in generation, to the efficient use of energy and related environmental objectives, and to the Government's target for CHP.

Q.11 Should appropriate dual firing and black start projects be treated as consistent with the Government's policy, on the basis that these are to be used only in ways which do not affect diversity (paragraphs 4c and 4d)? Should dual firing be regulated by consents or by an Order under Section 1 of the Energy Act 1976 (paragraph 6)?

11.1 Dual firing (gas/coal) schemes have benefits from the point of view of security of supply and for environmental objectives, as the consultation document notes. They will extend the useful life of coal-fired plant, by enabling the station to run on gas at times of year when gas is cheap, and on coal at other times. They will also enhance competition between fuels. The approach proposed in the consultation paper, of severely limiting the use of gas in dual/firing schemes, would be likely to lose these benefits.

11.2 Gas-fired black start projects could enhance security of supply and reduce costs of Uplift. They could be particularly valuable in certain areas. If their use were confined to testing and emergencies this would increase the cost to customers or render the projects not viable.

Q.12 Should other projects be considered against the objective of secure, diverse and sustainable supplies of energy at competitive prices (paragraphs 4e and 4i)?

12.1 Other circumstances where flexibility in the operation of the policy would be desirable so as to allow new gas-fired plants include:

- Stations intended to operate mainly at peak. These provide competition to the existing generators and enhanced security of supply at times when both these attributes are particularly valuable;
- Stations embedded in local distribution networks. These provide an element of competition to transmission and distribution networks, security of supply, and may facilitate competition to the local PES supply business;
- Stations in regions where there is insufficient locally available capacity to meet local demand. About half a dozen schemes which have applied for but not yet received a Section 36 consent are in areas that NGC's Seven Year Statement has identified as areas where generation could be accommodated without major NGC development, including in South Wales and the South West of England. The advice from Merz and McLellan emphasises the importance of locational price signals in order to minimise Grid system reinforcements. The effect of such signals would be frustrated if generators were not able to respond by building plant in parts of the network where it was most needed. Customers in such areas would not be able to mitigate price increases or enhance security of supply by promoting local generation projects. (Some concerns have been expressed about the capability of the gas transmission network to support such schemes. However, it is not clear that any such constraints restrict new gas demands at present, and if such constraints were identified there is no reason why they could not economically be avoided or overcome in the future by further investment.)

12.2 OFFER urges the Government to re-consider the application of the proposed consents policy to Scotland. So far as the immediate future is concerned, contracts are already in place between Scottish generators and coal producers. The proposed upgrading of the interconnector between Scotland and England will enable Scottish exports to England to be increased. This will provide an increased market for Scottish generators, including coal-fired generators. There are even greater problems of market structure and lack of competition in the Scottish electricity

market than in England and Wales. New entry in generation, likely to be by CCGT, will be important to challenge the market positions of the incumbent generators, facilitate competition in supply and add to the diversity of Scottish generation. Preventing new entry is likely to damage the prospects for competition and have adverse consequences for customers in Scotland.

Q.13 Should the Government use its power under section 14(2) of the Energy Act to approve proposed long-term contracts for obtaining a supply of natural gas for power generation, so as to ensure that their terms are not likely to distort competition and prejudice diversity and security of supply (paragraph 4g)?

Q.14 What considerations and criteria should be applied in assessing such proposed contracts? How should the Government treat such features as restrictions on re-sale, take-or-pay provisions, gas prices indexed to electricity pool prices, or long-term escalation formulae without re-openers?

13.1 The terms of contracts for the supply of gas to a power station project are likely to be an important element in the overall financing arrangements, either for the power station, or for the off-shore development from which it is to be supplied, or both. In the competitive gas and electricity markets, the risks associated with these contracts are carried by the parties. Terms in the contracts are necessarily very diverse, and continue to respond to the changing competitive market. It is not clear that any of the particular contractual features identified in the consultation paper necessarily have adverse implications for competition, diversity or security of supply. For example, long-term gas contracts, including contracts with take-or-pay provisions, may enhance diversity and security by facilitating UKCS gas developments. Linking gas prices to future UK electricity prices may represent one useful way for the gas producer to diversify exposure to future price movements, and for the electricity supplier to reduce risk. For the Government to use its Energy Act powers to take a view on the acceptability of particular contractual arrangements would represent a considerable intervention by Government in the preferred strategies of the parties for managing the risks of their projects. This is likely to increase the returns which they will seek from generation projects, with adverse consequences for prices. The complexity and inter-dependence of contract terms may be a formidable obstacle to prior approval, and indeed to detailed monitoring afterwards.

Q.15 Do consultees agree with the proposals for dealing with applications and notifications already before the Secretary of State and cases where some but not all of the relevant consents and clearances are in place (paragraphs 4f and 5)?

15.1 Companies which have already received Section 36 consent for generation projects are likely to have proceeded with the planning and design, and possibly even the construction, of their projects on the basis that it has not hitherto been Government policy to refuse Energy Act consent for projects which already have Section 36 consent. Changing this policy retrospectively would have adverse consequences for the risks perceived as associated with investment in power generation projects in the UK. This would increase the returns which future developers will seek from projects in this country, with adverse consequences for new entry costs, contracts markets, competition in generation and supply, and prices to customers.

Q.16 Should the policy apply only to those consents coming before the Government centrally through Section 14 and/or Section 36, avoiding the need for Local Authorities to take a view on energy policy where planning decisions fall to them? Is any formal guidance needed (paragraph 7)?

16.1 It would be preferable, and in line with a flexible application of the policy, for it to apply only to applications for consents coming before Government, and not to projects which require only local authority planning consent.

Q.17 Do consultees agree with the Government's expectations for falls in wholesale electricity prices and the proposed arrangements for monitoring them while the stricter consents policy remains in place (paragraphs 17 and 18)?

17.1 In its submission to the Review, OFFER indicated that present prices in the Pool were higher than the price at which new entry by CCGTs was attractive, and that there was therefore scope for greater competition and new entry to bring down prices in the Pool and contracts market, by at least 10 per cent, towards the new entry price.

17.2 Reforming electricity trading arrangements, and divestment of plant by major generators, are important for competition and for achieving such lower prices. However, the possibility of new entry is the key to such a reduction, in order to challenge the prices set by existing producers and deter collusion among incumbents with similar interests. The proposed restrictions on new entry will make lower prices more difficult to achieve. Such a policy should therefore be lifted as soon as possible.

17.3 OFFER monitors electricity prices on an on-going basis. It has recently published a report on Pool price increases in the winter of 1997/98. The DGES will report further on any electricity price movements which cause concern.

Q.18 Do consultees see further installation of FGD as important in meeting environmental objectives without the need to constrain generators on sources of coal (paragraphs 21 to 23)?

18.1 Retrofitting FGD increases the cost of operating a coal-fired plant. The response to Question 1 argued that, taking account of both capital and operating costs, it is normally more economic to reduce sulphur emissions by constructing CCGTs than by retro-fitting FGD to existing coal-fired plant. It would be preferable therefore to meet environmental objectives by a timely relaxation of the consents policy, rather than by encouraging the installation of FGD.

18.2 Even if the third-largest coal-fired generator were to install FGD equipment, as proposed in the consultation document, it would in due course still be necessary to build more gas-fired plant in order to meet existing sulphur limits (and, a fortiori, to meet the tighter limits recently proposed by the Environment Agency).

18.3 The consultation document indicates that the Environment Agency is discussing with generators its proposals for revision of the emission limits, so as to encompass the implications of the Government's proposals. Appropriate arrangements for the re-allocation of sulphur permits will be of great importance in facilitating the disposal of coal-fired plant to competitors, and indeed in allowing existing coal-fired generators to compete effectively.