

GAS ACT 1986 (AS AMENDED)

DIRECTIONS PURSUANT TO SECTION 21

AND

ORDER PURSUANT TO SECTION 27A

GIVEN TO

TRANSCO plc

**IN CONNECTION WITH THE MODIFICATION OF THE TRANSCO PIPE-LINE
SYSTEM FOR THE PURPOSE OF CONVEYING GAS TO THE PROPOSED POWER
STATION AT**

LANGAGE ENERGY PARK

18 FEBRUARY 2003

**DIRECTIONS UNDER SECTION 21, AND
ORDER UNDER SECTION 27A
OF THE GAS ACT 1986 (AS AMENDED)**

1. In these Directions and Order:-
 - “the Act” means the Gas Act 1986 (c.44) as amended;
 - “the Authority” means the Gas and Electricity Markets Authority;
 - “Ofgem” means the office established to assist the Authority in discharging its statutory obligations;
 - “WPL” means Wainstones Power Limited, (company number 03462783) having its registered office at Pickford Wharf, Clink Street, London SE1 9DG;
 - “Transco” means Transco plc (company number 2006000) having its registered office at 1-3 Strand, London WC2N 5EH;
 - “Langage” means the (proposed) power station of WPL at Lyneham;
 - “the application” means the application made by WPL to the Authority on 1 February 2002 for directions under section 21 of the Act and the subsequent application made on 5 July 2002 for an order under section 27A of the Act in connection with the terms of a connection to Transco’s gas pipeline system;
 - “NTS” means Transco’s National Transmission System;
 - “LTS” means Transco’s Local Transmission System;
 - “LDZ” means Transco’s Local Distribution Zone;
 - “ARCA” means an Advance Reservation of Capacity Agreement.

2. The Authority may determine by order, on a reference by either party, a dispute arising under specified sections of the Act pursuant to its powers under section 27A of the Act, and the Authority hereby orders Transco as follows:-

- (i) this Order applies in relation to this particular case;
- (ii) that the circumstances in which, and the terms on which, Transco is to connect Langage power station to Transco’s pipeline system should be based on the application of Ofgem’s shallow connection policy; and therefore the connection point for connection charging purposes, based upon Transco’s current system, is deemed to be Transco’s existing above ground installation at Lyneham. For the avoidance of doubt, the connection for transportation charging purposes is an NTS connection at the proposed new off-take at Lyneham, and
- (iii) the cost of feasibility studies for obtaining an estimate for the costs of connection, which WPL has paid to Transco, amounting to approximately £2.5 million, are costs which are appropriate to recoup through transportation charges not connection charges. The Authority therefore orders Transco to refund those costs to WPL on the date the ARCA, as mentioned in paragraph 3(iv) below, is signed.

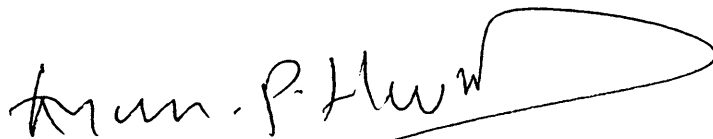
3. The Authority, in pursuance of its powers under section 21 of the Act, following receipt of the application, after hearing Transco on the matter, after giving notice to the Health and Safety Executive, hereby gives the following directions to Transco;-

- (i) the modifications which should be made in consequence of the application are those which are necessary to ensure the delivery of the volume of gas specified in the ARCA, based upon the policy specified in paragraph 2(ii) above and sub-paragraph (iii) below;

- (ii) such modifications may be provided by up-rating a South West LDZ LTS 600mm diameter pipeline between Kenn and Fishacre to be operated as part of the NTS, extending the NTS from Fishacre to Lyneham through the construction of a new 600mm diameter pipeline, constructing a new NTS off-take near Lyneham and providing an off-take facility for WPL at the proposed NTS off-take near Lyneham;
- (iii) the sum which WPL should pay Transco by way of consideration for the said modifications must be no more than a fixed connection charge of £513,800;
- (iv) the arrangements which should be made by WPL in consequence of the application are that WPL, by 31 July 2003 should enter into a two year ARCA guaranteeing the payment of one year's exit capacity charges; and
- (v) upon both Transco and WPL entering into the above mentioned two year ARCA guaranteeing the payment of one year's exit capacity charges,
 - a. Transco and WPL should also enter into an agreement guaranteeing that the modifications specified in sub-paragraph (i) and (ii) above are carried out;
 - b. Subject to these Directions, in particular sub-paragraph (iii) above, the agreement should specify the terms and conditions for payment for the works by WPL to Transco; and
 - c. Subject to these Directions, the agreement should specify the terms and conditions for ensuring that Transco carries out the necessary modification works.

4. Pursuant to section 27A of the Act,

- (i) the reasons for reaching this decision with respect to the dispute are included in the determination decision attached to these Directions;
- (ii) no provisions as to costs or expenses are made; and
- (iii) WPL has been given particulars of the modifications specified in the directions.



Authorised in that behalf by the _____
Gas and Electricity Markets Authority

18 February 2003

**DETERMINATION BY THE GAS AND ELECTRICITY MARKETS AUTHORITY OF A
DISPUTE REFERRED TO IT UNDER SECTION 21, AND IN THE ALTERNATIVE,
SECTION 27A OF THE GAS ACT 1986 CONCERNING THE CHARGES PROPOSED
FOR A MINIMUM OFF-TAKE FACILITY AND ASSOCIATED WORKS FOR
INDUSTRIAL PREMISES**

1. INTRODUCTION

- 1.1 Wainstones Power Limited (WPL) has been discussing with Transco plc (Transco) the terms of a connection to Transco's pipeline system for gas transportation to WPL's proposed 800MW gas fired power plant at Langage near Plymouth in Devon. WPL and Transco have been unable to reach agreement regarding the contribution that Transco has asked WPL to make towards the cost of a minimum off-take facility and associated works ('the connection') for Langage.
- 1.2 WPL has formally requested that the Gas and Electricity Markets Authority ('the Authority') determine this dispute under sections 21 and 27A of the Gas Act 1986 (as amended) ('the Gas Act').
- 1.3 The Office of Gas and Electricity Markets ('Ofgem') is the office established to assist the Authority in discharging its statutory responsibilities.
- 1.4 This document sets out the background to the dispute, the views of the parties, the directions that Ofgem has made in determining the dispute and the reasons for these directions.

2. REGULATORY BACKGROUND

The relevant provisions of the Gas Act

- 2.1 Under section 4AA of the Gas Act, the Authority's principal objective is to protect the interests of consumers in relation to gas conveyed through pipes, wherever appropriate, by promoting effective competition. The Authority has a duty to carry out its functions in a manner best calculated to further the principal objective having regard to the need to secure, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met. The Authority must also have regard to the need to secure that licence holders are able to finance the activities which they are authorised or required to carry on.
- 2.2 Section 9(1)(a) of the Gas Act requires Transco to develop and maintain an efficient and economical pipeline system for the conveyance of gas. Section 9(1)(b) requires Transco to comply, so far as it is economical to do so, with any reasonable request for it to connect any premises to its system and convey gas by means of that system to the premises. Section 9(2) of the Gas Act requires Transco to avoid any undue preference or undue discrimination in connections or the terms under which it undertakes the conveyance of gas through its system.
- 2.3 Section 10 of the Gas Act requires Transco to connect certain premises to a relevant main. According to the Gas Act, a relevant main is any main of the gas transporter through which it is, for the time being, distributing gas and which is not being used for the purpose of conveying gas in bulk but rather being used for the purpose of giving a supply of gas to any premises in the area at a rate not exceeding 75,000 therms a year.
- 2.4 Section 21 of the Gas Act enables the Authority to make directions if it appears to the Authority, following an application, that the pipeline system operated by a gas transporter (in this case Transco) can and should be modified:
- (a) by installing a junction through which another pipeline may be connected to the system; or

- (b) by modifying apparatus and works associated with a high pressure pipeline so as to increase the capacity of the pipeline.

Such directions may specify:

- (a) the modifications which the Authority considers should be made;
- (b) the sums or methods of determining the sums which the Authority considers should be paid to the gas transporter by the applicant by way of consideration for the modifications;
- (c) the arrangements which should be made by the applicant within a specified period for the purpose of securing that the sums will be paid to the gas transporter if it carries out the modifications.

2.5 Section 27A of the Gas Act requires the Authority to determine, on referral, any dispute arising from:

- (a) Transco's duty to comply, so far as it is economical to do so, with any reasonable request for it to connect any premises to and convey gas by means of its pipeline system;
- (b) Transco's duty to connect certain premises; or
- (c) Transco's power to require security for payment of money due.

The adoption of a shallow connection policy

2.6 The Office of Gas Supply (Ofgas¹) consulted on connection policy between August 1996 and February 1997². Following this consultation, Ofgas concluded that a 'shallow' definition of connection should be applied to all loads. The shallow policy commanded significant support.

2.7 Under this policy, the point of connection for charging purposes is the point where the new connection pipes join the existing main (that is, where the existing system has sufficient capacity to meet the connecting load, disregarding existing loads at that point). The costs of any reinforcement upstream of that

¹ Ofgas merged with the Office of Electricity Regulation to form Ofgem.

² 'British Gas Transco: connection and system extensions, Regulating for competition, A consultation document' Ofgas, August 1996; 'Transco: connections and system extensions, Regulating for competition, Follow-up to Ofgas' consultation document' Ofgas, February 1997.

point would be recovered through transportation charges. Any reinforcement downstream of that point would be included in the connection charge. This policy was then applied in a 1998 determination with respect to the AES Barry power station³.

The exit capacity regime

- 2.8 The current arrangements relating to the booking of firm and interruptible exit capacity rights on Transco's National Transmission System (NTS) were introduced with Transco's network code in March 1996. In order to achieve its statutory obligations to ensure that all reasonable demands for gas on a peak day are met, Transco currently operates a set of arrangements that allow it to allocate capacity to each supply point based upon registered demand requirements.
- 2.9 Where capacity requirements exceed system capabilities, Transco can invest in pipelines to provide sufficient firm capacity to meet demand, use stored gas as a substitute for physical pipeline capacity to meet demand or interrupt a customer's supply of gas.
- 2.10 Transco currently allocates exit capacity on an administrative basis based on the status of the site or offtake point. Under its transmission asset owner (TO) price control for April 2002 to March 2007, Transco has been provided with funding or allowed revenue for the costs of investment in its pipeline network. Transco recovers this revenue through a combination of charges. At the exit points from its system, Transco levies firm exit capacity charges. Transco also enters into interruptible transportation arrangements. In return for having interruptible status, a customer receives relief from various charges such as firm exit capacity charges.
- 2.11 Transco currently manages network constraints under the existing arrangements mainly by interrupting gas supply to customers with interruptible transportation agreements and by constraining on the use of Liquefied Natural Gas (LNG) storage capacity. Transco may call interruption in the event of network capacity constraints, high system demand, in an emergency or for testing purposes.

³ *Determination of the direction in respect of the modification of the Transco pipeline system for the purposes of conveying gas to Barry power station, Ofgas, 2 March 1998.*

- 2.12 In March 2001, Ofgem published a review of Transco's NTS exit capacity, interruption and LNG arrangements⁴. The review identified a number of weaknesses in the current arrangements and set out Ofgem's proposals for reform.
- 2.13 This review identified a number of concerns with the present exit capacity regime. In particular, Ofgem indicated that the present exit arrangements offered customers with little flexibility regarding the terms of their interruptible contracts. Ofgem also raised concerns that the arrangements discriminated between interruptible users by providing sites with similar discounts for providing Transco with different levels of interruptible services.
- 2.14 As a result of these concerns, Ofgem suggested a number of proposals to reform the exit capacity regime. These proposals involved providing Transco with market signals and financial incentives to meet customers' demands in the most cost effective way by trading off investment in pipeline, interruption and the use of LNG. In particular, the proposals are intended to provide Transco with financial incentives to contract more efficiently for interruption on the NTS and to respond to customers' needs for firm capacity by undertaking additional investment where it is efficient to do so. Ofgem's proposals for these incentives were consulted on in September 2001⁵ and finalised in December 2001⁶.
- 2.15 The proposals subsequently led to a number of modifications that were made to Transco's gas transporters (GT) licence⁷. In particular, on 27 September 2002 Ofgem directed that a number of modifications to Transco's GT licence be made with effect from 1 April 2002. These licence modifications introduced into Transco's GT licence its price control and system operator (SO) incentives for April 2002-7 and included an NTS exit capacity investment incentive.

⁴ *The new gas trading arrangements: review of Transco's exit capacity, interruption and liquefied natural gas arrangements*, A consultation document, Ofgem, March 2001.

⁵ *Transco's National Transmission System – System Operator incentives 2002-7, Initial Proposals* Ofgem, September 2001.

⁶ *Transco's National Transmission System system operator incentives 2002-7, Final Proposals* Ofgem, December 2001.

⁷ *Transco's Price Control and NTS SO incentives 2002-7 Licence modifications* Ofgem, September 2002.

- 2.16 The licence modifications provided for two stages of reform for the exit capacity regime. Transitional SO exit capacity incentive arrangements apply from 1 April 2002 to 31 March 2004. Longer-term reform of the exit capacity regime is scheduled to be implemented from 1 April 2004. As part of these arrangements Transco has been provided with target allowances for making payments in respect of interruptions of sites. To aid the development of the new NTS exit regime, Ofgem has established the Exit Reform Advisory Group that will meet at least bi-monthly.

Advanced Reservation of Capacity Agreements (ARCAs)

- 2.17 An Advanced Reservation of Capacity Agreement (ARCA) is an agreement that is designed to provide Transco with additional protection from the risks associated with reinforcing its system to supply new loads. In particular, ARCAs are intended to protect Transco against incurring costs in preparing for the connection of a large load that subsequently decides not to flow gas. The agreements are subject to Ofgem's approval.
- 2.18 Under an ARCA, Transco commits that the appropriate capacity will be available on the stated first day of the delivery of gas ('gas-on' date). To protect Transco from some of the risk that having made the relevant investment the load will not result, an ARCA includes a guarantee that the signatory will pay one year's exit capacity charges and weighted average entry charges even if the gas does not flow. Transco recently consulted on its proposed changes to the calculation of the ARCA commitment.
- 2.19 In 1997, Ofgas circulated its conclusions on ARCAs.⁸ It concluded that ARCAs are only suitable in limited circumstances, namely if Transco can demonstrate that a particular load is riskier than the overall portfolio of firm loads. It further concluded that commitment beyond one year is not normally appropriate, as the network code only requires capacity to be booked on an annual basis. ARCAs are only available (indeed Transco requires them) for new firm loads with a peak supply of 0.5mcm/d⁹ or greater (roughly 20 million therms per annum) where

⁸ 'A Report on Agreements Made Pursuant to The Network Code, Including Advance Reservation of Capacity Agreements (ARCAs).' Ofgas, October 1997

⁹Mcm/d is used to denote million standard cubic metres per day.

specific system reinforcement has been identified as being necessary to meet the specific load requirements.

3. BACKGROUND TO THE DISPUTE

- 3.1 The Langage project is a proposal for an 800 MW, gas-fired power station outside Plymouth in a 180-acre business park. WPL contacted Transco in May 1997 about the possibility of Transco supplying gas to Langage at a rate of 1.64mcm/d. In November 1997, WPL requested a phased load of 3.5mcm/d by October 2001 rising to 5.21mcm/d by October 2002. Following this request, Transco identified modifications to its pipeline system that it considered represented the optimum method of providing additional capacity to meet the load.
- 3.2 A plan showing the work Transco proposes is contained in Appendix 1. Transco proposes to:
- ◆ uprate a South West (SW) Local Distribution Zone (LDZ) Local Transmission System (LTS) 600mm pipeline between Kenn and Fishacre and operate this as part of the NTS including necessary modifications to Above Ground Installations (AGIs);
 - ◆ further extend the NTS from Fishacre to Lyneham through the construction of a new 600mm pipeline;
 - ◆ construct a new NTS offtake near Lyneham feeding back into the SW LDZ LTS;
 - ◆ reconfigure the NTS and SW LDZ LTS to split the SW LDZ LTS into 2 sections fed from Kenn and the new Lyneham offtake; and
 - ◆ provide an off-take facility for WPL at the proposed NTS off-take near Lyneham.

- 3.3 Transco proposes adopting the duplicate LTS pipeline and the new extension pipeline to the new offtake facility near Lyneham into the NTS system following the completion of the proposed works. Of the proposed works, the following will be LTS assets:
- ◆ the existing LTS pipeline between Kenn and the existing Lyneham LTS AGI;
 - ◆ the existing LTS system downstream of the Lyneham LTS AGI; and
 - ◆ the proposed LTS pipeline linking the new Lyneham AGI and the existing Lyneham LTS AGI will be LTS assets.
- 3.4 Since early 2001, Ofgem has discussed in meetings and in correspondence with the parties, a proposed ARCA in respect of the proposed network reinforcements as well as Ofgem's policies on connection charges. During these discussions, WPL raised concerns regarding the level of contribution being required by Transco in respect of its connection to Transco's NTS. In response to these concerns, Ofgem identified the shallow connection policy as the basis on which Transco should set charges when connecting new loads.
- 3.5 On 1 February 2002, Transco asked for £22.9 million from WPL as the total charge for the connection. Transco requested that WPL indicated its agreement by signing both an ARCA and an associated connection agreement. Transco has said that this offer of £22.9 million was time-limited and made to WPL to facilitate reaching financial closure. The cost of this connection were calculated as follows:
- ◆ reconfiguration of Kenn offtake and uprating of the LTS pipeline from Kenn to Fishacre - £1m;
 - ◆ construction of the new 600mm NTS pipeline from Fishacre to Lyneham and construction of new NTS offtake near Lyneham - £20.37m; and
 - ◆ reconfiguration of Lyneham block valve installation - £0.4m.
- 3.6 In the course of the discussions between the parties, the amount that Transco has requested WPL pay has varied. Transco now states that the costs for the above works have increased since the original fixed price offer was issued to WPL on 1 February 2002. Transco currently estimates that the costs of the connection are approximately £25m. In addition, Transco has indicated that on the basis of an

NTS connection at Kenn, the WPL load fails Transco's economic test for connections by approximately £5m. Under this test, Transco compares the costs of reinforcement upstream of the proposed connection point with an estimate of the transportation revenues that it would receive in respect of the new load. Transco has argued that as a result of the application of this test, this sum should be funded by WPL to prevent any cross-subsidy in favour of WPL by other system users and to ensure compliance with its obligations under section 9(1) of the Gas Act.

- 3.7 On 1 February 2002, WPL asked the Authority to proceed with a formal determination under section 21 of the Gas Act 1986. Subsequent to WPL's request, Ofgem concluded that it may not be able to resolve the dispute between the parties using only its section 21 powers. Ofgem reached this conclusion because not all the work Transco proposes that is material to the dispute between the parties (as described in paragraph 3.2) could be defined as installing a junction through which another pipeline may be connected to the system or modifying apparatus and works associated with a high pressure pipeline so as to increase the capacity of the pipeline. Ofgem therefore concluded that in order to fully determine the matter it may need to exercise its powers under section 27A of the Gas Act. In this respect, WPL has also referred the issue to Ofgem under section 27A.
- 3.8 As a result of the lengthy discussions between the parties that have culminated in this determination, the 'gas-on' date for the Langage project has changed several times. The current 'gas-on' date for the project is expected to be 1 October 2005.

Contractual arrangements

- 3.9 The parties will need to sign various contracts for the connection to take place and for Transco to transport gas to the power station. These contracts include:
- ◆ a construction agreement setting out the work Transco will complete downstream of the connection point and the amount WPL will pay for that work;

- ◆ an ARCA providing assurance to WPL that its shipper will be able to book capacity in respect of the 'gas-on' date six months in advance and a guarantee that WPL will pay one year's exit capacity charges and weighted entry charges even if the gas does not flow; and
- ◆ a Network Exit Agreement (NExA) setting out the technical parameters of the gas supply to the power station, including for example, ramp rate requirements.

3.10 Transco has also indicated that a suitable commercial arrangement coincidental to the ARCA is needed to recover any customer contribution in respect of works upstream of the charging point.

Issues to be determined

3.11 Transco and WPL have given their views to Ofgem in a number of meetings, various correspondence and written submissions. At the request of the parties, Ofgem held an oral hearing on 28 August 2002. The parties made oral submissions, responded to each other's submissions and answered questions from Ofgem.

3.12 Ofgem has identified four key issues that needed to be resolved for Ofgem to determine the dispute, namely:

- ◆ the location of the relevant connection point for charging purposes;
- ◆ the costs of the connection;
- ◆ whether the connection charge should be fixed or incorporate cost pass through arrangements or some combination of the two; and
- ◆ the nature of any contractual risk mitigation arrangements.

3.13 The following sections of the determination describe the parties' views and Ofgem's decision on each of these issues. Ofgem then discusses the implications arising from the determination and sets out its conclusions and decision. The appendices contain a plan of the proposed work and a technical report.

4. THE RELEVANT POINT OF CONNECTION FOR CHARGING PURPOSES

4.1 The first issue to be determined is the relevant connection point.

Transco's views

4.2 Transco's test for identifying the connection point as set out in '*Transco statement of principles and methods to be used to determine connection and disconnection charges*', identifies the point of connection as 'the closest economically practical point to the consumer where gas is notionally available for offtake at the pressure required by the consumer'.

4.3 Transco asserted that its test for identifying the connection point is fundamentally no different from Ofgem's definition of a connection point. Transco argued that it has sought to add precision to Ofgem's test to enable the application of the shallow policy for connections across its gas system. Transco explained that:

- ◆ 'the closest economically practical point' seeks to account for the fact that physically, the nearest main may not actually be the cheapest main to which to connect;
- ◆ 'notionally available' seeks to embody what Ofgem described by 'disregarding the existing loads within the system' and;
- ◆ it has added 'at the pressure required by the consumer' to capture the point that certain consumers may wish to offtake at a higher pressure than may be enabled by the closest tier of the pipeline system.

4.4 Transco argued that a pressure test is appropriate within the definition of the point of connection because of the impact large loads may have on a network. Transco indicated that it is wholly appropriate to use some form of threshold pressure to determine the point of connection. Transco confirmed that for the bulk of systems within the network this is the minimum system pressure. Transco has stated that the pressure criterion is particularly important in light of the shallow connection policy.

4.5 Transco stated that its shallow connection policy interpretation seeks to identify a point in the system where:

- (a) all costs downstream of that point specifically required by that connection; and
- (b) any uneconomic costs upstream of that point (as determined by Transco's economic test) would be recovered from the connecting party via a customer contribution.

Transco stated that under a deep connection policy, all upstream costs would have to be funded in full by the connecting party. Transco added that it believes that the pressure criterion is of particular interest to itself and WPL for the development of a gas-fired power station which is sensitive to the terminal pressure of that power station.

4.6 Transco also says that the point of connection is Kenn, at the extremity of the NTS because Langage requires operating pressures that can only be made available through a direct NTS connection. In addition, Transco says WPL requested an NTS connection. Transco does not believe that the connection point is in dispute. Transco has also recognised that according to its test, Lyneham could be considered an LTS connection charging point and also a connection point and as such would attract the appropriate LDZ charges.

4.7 Transco stated that in translating Ofgem guidance into connection policy it has distinguished between NTS and LDZ connection points. Transco identified the fundamental drivers for the distinction as separate NTS and LDZ organisations and separate NTS and LDZ charges. Transco indicated that for an NTS connection, which by its nature would lead to an NTS supply point incurring only NTS charges, Transco will identify the nearest point on the NTS that satisfies that test. For an LDZ connection, it similarly identifies the appropriate connection point on the LDZ.

4.8 Transco noted that the issue of pressure is important as well for this distinction. Transco explained that a number of NTS connected loads paid for connection to the NTS at a point which was further away from the load than an LDZ connection point. Transco stated that these loads could have had a closer LTS

connection but had wanted the higher pressure available from the NTS. Transco added that there is a clear difference between an NTS solution and an LTS solution in terms of pressure delivery. Transco indicated that it has interpreted from ongoing negotiations with WPL that pressure is important because of the nature of the development, making an NTS connection necessary. Transco argued that the purpose of its connection charging point analysis, in particular the pressure criterion is to identify an area of the system where it is appropriate to attach a load of that size.

- 4.9 Transco noted that there could be some ambiguity with respect to the connection point but added that if Lyneham is the connection point then the connection is an LTS connection. Transco stated that irrespective of the location of the connection point, the work will be the same and that any methodology for assessing the costs payable by WPL should be relatively immune to that decision.

WPL's views

- 4.10 WPL considered that Transco was not applying its test appropriately and in particular was not disregarding existing loads. WPL stated that in particular, Transco is not treating WPL as a new customer in determining the connection charge. As such, WPL considers that Transco is in effect discriminating against WPL as a new applicant for connection to the system and not treating it with equivalence either to new customers or to those who are differently geographically located. WPL considers that Transco is taking into consideration the pressure of existing users and the impact of the Langage project on supplying gas to these customers. WPL stated that if there were no other users on the system upstream of this connection point and WPL were the first users requesting the connection, it would be able to receive the pressure that is required at the offtake point and there would not be a pressure degradation problem. In these circumstances, WPL argued that it would not be required to pay for works that are intended to maintain pressures for existing customers.
- 4.11 WPL stated that it does not understand why the historic circumstance of the NTS stopping at Kenn is used to identify the connection point when manifestly

Lyneham is a perfectly satisfactory connection point and will be adopted into the NTS following the proposed work.

4.12 WPL argued that the identification of the appropriate connection point is part of the appropriate allocation of individual cost items as common costs or incremental costs. WPL stated that the location of the connection point ought not to obscure the critical question of determining whether a cost item is a common cost or incremental cost. WPL suggested that incurring a cost downstream of a connection point should not lead automatically to the allocation of that cost to WPL because Transco should not recover from WPL costs downstream of the connection point which arise other than from the incremental needs of WPL.

4.13 WPL argued that the distinction between 'deep' and 'shallow' connection charges is what could be described as a distinction between common fixed costs ('deep') and incremental costs ('shallow'). WPL continued that some common fixed costs appear to be 'shallow' because they are located 'downstream' to mitigate greater 'upstream costs', however, they should be recovered as common costs from all users equally. WPL stated that incremental costs that are paid by new customers should be strictly those required to service that customer, and should not include any costs incurred for facilities which can be used for other customers, present or future. As such, WPL argued that it should not have to pay for 'common costs' merely because it has connected to the system at a particular moment in time.

Discussion

4.14 The determination of the relevant point of connection can, in some circumstances, depend upon the connection policy that is applied. There are a number of such policies that can be applied. These include:

- ◆ 'deep connections' where the transporter makes an estimate of the total costs incurred by the proposed connection, and charges these directly to the connecting party; and
- ◆ 'shallow connections' where the transporter charges only the actual costs of connection to, essentially, the nearest part of the transportation system, with all other costs recovered through transportation charges.

- 4.15 If these two policies were seen as being at different ends of a spectrum, then there are variants to each. For example, Distribution Network Operators (DNOs) adopt a form of shallow policy for supply connections, and a deep policy for generation connections.
- 4.16 As explained above, the relative merits of each policy have been discussed in Ofgas' previous consultation on connection charging in 1996 and 1997. In summary, deep connection policy is viewed by some as ensuring that any new customer pays the real costs associated with a connection including costs upstream of the connection point. In this respect, the application of a deep connection policy is regarded by some as providing cost reflective signals to companies wishing to connect to transportation networks.
- 4.17 In contrast, a shallow connection policy is viewed by some as ensuring that connections are provided on a non-discriminatory basis. In particular, the application of a shallow connection policy ensures that connecting parties are not required to pay for reinforcement costs that would effectively benefit future customers. In this respect, a shallow connection policy is regarded by some as a method of avoiding inter-temporal cross-subsidies between connecting parties to a pipeline network.
- 4.18 In the area of gas connections, Ofgem has adopted a shallow rather than a deep connection policy. This policy was settled in Ofgas' February 1997 conclusions document on Transco connections and system extensions. This document states that the point of connection for charging purposes would be the point where the new connection pipes join the existing main (that is, where the existing system has sufficient capacity to meet the connecting load, disregarding existing loads at that point).

- 4.19 Much of the discussion between the parties was based around Kenn being the relevant connection point for charging purposes. Indeed Transco considers that Kenn should be the relevant connection point for charging purposes as it is the closest point on the NTS to the proposed offtake that meets the criteria contained in Transco's connection test. However, Transco has also accepted that Lyneham could be the connection point for charging purposes under a shallow connection test for an LTS (and hence, LDZ) connection. In this respect, Transco accepts that a connection at Lyneham as the system is currently configured would satisfy the pressure criterion outlined in Transco's connection test notwithstanding the size of the Langage power station load.
- 4.20 In that light, Ofgem concludes that, under the shallow connection policy, the relevant connection point for the purposes of determining the connection charge should be Lyneham. Ofgem's decision that Lyneham is the appropriate connection point for the purposes of determining the connection charge has implications for Transco's proposed cost recovery. These are discussed later.
- 4.21 In determining the costs associated with connecting to Lyneham, Ofgem notes that the works to be undertaken by Transco involve the construction of a new NTS offtake near the present Lyneham LTS junction. This new NTS offtake is to be located adjacent to the proposed WPL AGI.
- 4.22 Ofgem has, however, based its determination of the connection point on Transco's system as it is currently configured. In this respect, Ofgem does not consider that it would be an appropriate application of the connection test to adjust the connection point to reflect proposed works that Transco intends to undertake. The connection point in this respect is the closest point on the network at the time of the determination. This connection point is the Lyneham LTS junction as it currently exists.
- 4.23 Ofgem would note that the shallow connection policy set out in 1997 is not specific to the NTS. Rather, in principle, a shallow connection policy applies equally to LDZ connected loads. However, it is the ability to vary transportation charges that enables Transco to continue to give signals for connecting parties, while avoiding the discrimination that arises from deep connection policy. This ability to vary transportation charges is not currently possible given the structure

of LDZ charges. Ofgem will be reviewing the structure of LDZ charges during 2003. In addition, the application of a shallow connection policy to LDZs also has to be applied in such a way as that it is consistent with the definition of "relevant main" contained in the Gas Act.

Ofgem decision

- 4.24 The appropriate connection point for the purposes of determining the connection charge is the existing AGI at Lyneham.

5. THE COSTS OF CONNECTION

- 5.1 Once the appropriate point of connection is identified, according to a shallow connection policy, the costs of any reinforcement upstream from that point should be recovered from all users through transportation charges. The costs of any reinforcement downstream of that point would be included in the connection charge and should reflect the costs of connection and not the costs of enhancing the network to accommodate this or other loads.

Transco's views

Calculation of connection charge

- 5.2 Transco stated that it disregards other loads to establish the connection charging point, but has regard to the system as it presently stands in order to derive the optimum reinforcement solution and to ensure compliance with its obligations under section 9(1)(a) of the Gas Act. Transco believes that this is consistent with Ofgas' conclusions in its 1997 document.
- 5.3 Transco explained that of the £100 million investment it will need to undertake, on the basis of an NTS connection at Kenn, it is seeking only to recover from WPL approximately:
- ◆ £25 million connection costs for downstream investment;
 - ◆ £5 million customer contribution for costs upstream of Kenn as a result of the economic test (see below); and

- ◆ £5 million ARCA commitment which would fall due in full or in part in the event that transportation charges incurred by the connected load fail to meet or exceed that commitment during the term of the ARCA.
- 5.4 Transco also stated that it could offer a direct connection from the Kenn offtake. Transco has estimated the capital cost of that connection pipeline at £47million.
- 5.5 Transco states that it utilises an “economic test” to assess any specific reinforcement required to support a new load. This economic test assesses the reinforcement costs for the load and the transportation income expected to arise from the load. If estimated costs exceed the expected income (over the project life which Transco takes to be a maximum of 15 years in respect of power stations), Transco is unlikely to recover the incurred costs from the transportation revenue associated with that load.
- 5.6 Transco states that should its economic test demonstrate that the connection of the load is uneconomical then a direct financial contribution from WPL for specific reinforcement upstream of the connection charging point is appropriate. Transco argues that in these circumstances a direct financial contribution is necessary to comply with its obligation under section 9 of the Gas Act.
- 5.7 Transco continues to believe that is appropriate to apply an economic test in order to judge whether its investment will be economic and to determine the extent of any customer contribution payable through the connection charge. Transco has stated for the purpose of clarity, that any such customer contribution is coincidental to the ARCA and is related to the provision of capacity and not related to the connection charge. Transco asserts that the economic test is envisaged by the wording of section 9(1)(b) of the Gas Act. Transco explained that its test compares the costs of the upstream reinforcement with an estimate of the transportation revenues it would receive from the new load over time. To the extent that a load fails the test, Transco requires a contribution. Transco indicated that the requirement on a customer to pay a contribution is consistent with section 9(1)(b) of the Gas Act and would avoid a cross-subsidy in favour of the customer from other system users. Transco considers that the economic test ensures that the user funds the costs it has incurred on the system. Transco states that according to its Economic Test, connecting the load is uneconomic.

- 5.8 Transco also stated that it uses the economic test effectively to supplement the role of transportation charges and that it preferred to meet any shortfalls of revenues from a customer contribution rather than transportation charges. In this respect, it indicated that transportation charges and exit charges are relatively blunt instruments for cost recovery requiring detailed Long Run Marginal Cost (LRMC) analysis.
- 5.9 Transco indicated that it has updated the economic test for this load against the current pressure and the reduction of transportation charges that occurred in July 2002. Transco states that the investment upstream of Kenn is uneconomic by £5 million because the expected income from transportation charges from this load falls £5 million short of the actual specific identified reinforcement (as allowed against its regulated rate of return). Transco therefore believes that a £5 million contribution to the upstream costs from WPL is consistent with section 9(1)(a) of the Gas Act and will avoid cross subsidy between Langage and other system users. Transco added that throughout the negotiations for this project, whenever a relevant cost factor has changed, it has re-assessed its reinforcement solution and updated its economic test. Transco asserts that this is the reason for the variation in the costs that it has required WPL to pay.
- 5.10 Transco indicated that the possible inclusion of works downstream of Kenn in the TO price control for 2002-7 was not relevant to determining the level of customer contribution as a result of applying the economic test. Instead, it explained that the economic test relates to the allocation of costs between system users, not whether or not a particular asset forms part of the Regulatory Value (RV). Transco explained that although the proposed work (including that downstream of Kenn) may have been included in the price control it can still consider investments to be uneconomic. In particular, Transco stated that it does not judge 'economic' in relation to whether or not Transco is paid in respect of an investment, but in relation to whether the charges paid by a user end up funding the cost that a user has incurred on the system.

Proposed works

- 5.11 Transco believes the fundamental questions about the proposed works and the level of the connection charge are whether it has proposed the most efficient engineering solution and who should pay. Transco asserts that its solution has been driven by and is consistent with its statutory duties. Transco recognises that the proposed connection solution provides some intangible benefits in relation to security of supply but Transco asserts that the solution does not provide it with spare capacity. Transco added that no economic value can be ascribed to the added security of supply benefits associated with the proposed solution. Transco recognises that the reinforcement work improves local security of supply by effectively duplicating the combined transmission system from Exeter to Plymouth. The second crossing of the River Exe will also provide greater off-peak flexibility against the ongoing risk of pipeline exposure through scouring and third party interference. Transco says that it derives no additional financial benefit from the increased security of supply associated with the proposed reinforcement.
- 5.12 Transco says that the only non-arbitrary way to design the connection solution is to find the optimum system solution and then to look downstream of the connection charging point to establish the appropriate connection cost. Transco believes it has proposed the optimal connection option. Transco added that a particular alternative that was identified by WPL involving a 450mm pipeline between Fishacre and Lyneham would lead to a lower cost downstream of Kenn. However, it indicated that this would be a sub-optimal overall solution and thus in contravention of its statutory duties. Transco stated that if it used a solution with the 450mm pipeline between Fishacre and Lyneham it would incur higher costs upstream that would lead to an increase in customer contribution flowing from the application of the economic test. Transco argued further that any such increase in upstream costs that are not recovered from the connecting party through a customer contribution would result in further cross subsidisation of WPL by other system users.
- 5.13 Transco explained that to determine the specific reinforcements required for the load, it looks at the 10-year investment plan without the load and with the load

and the reinforcements. From this process Transco has inferred that the reinforcements proposed downstream of Kenn are only providing capacity for the Langage load. Transco further explained that the sizing of the 600 mm pipeline between Fishacre and Lyneham is necessary in order to take appropriate NTS pressures to Lyneham and to replace the loss of LTS capacity resulting from the adoption of the Kenn to Fishacre line into the NTS. Transco asserted that its proposed works provide the optimum overall investment solution in the south west region of the network by reducing the costs upstream of the Kenn offtake.

- 5.14 Transco indicated that the Langage demand is now 5 times greater than the expected 10 year growth rate following a recent demand forecast increase in expected general load growth. Transco asserted that it makes very little difference to the results of the plan analysis undertaken last year given that the original demand forecast was very small.

WPL's views

Calculation of the connection charge

- 5.15 WPL noted that the overriding objective for Transco is the provision of an efficient and economical pipeline system which facilitates competition and avoids undue preference or discrimination.¹⁰ WPL argued that this requires the creation of a charging methodology which respects certain fundamental principles namely:
- ◆ the distinction between common costs and incremental costs and the principle that common costs should be borne without discrimination between existing and new customers;
 - ◆ that incremental costs are those specifically required to service the customer;
 - ◆ that new customers should not be obliged to pay additional costs simply because existing users are paying too little for the use of common facilities under Transco's existing methodology; and
 - ◆ that risks be allocated efficiently.

- 5.16 WPL believes that Ofgem's shallow connection policy is intended to reflect the distinction between common costs and incremental costs and the principle that common costs should be borne without discrimination between existing and new customers.
- 5.17 WPL asserted that efficient investment requires:
- ◆ cost minimisation;
 - ◆ customers to be treated equivalently, new customers should not subsidise existing customers; and
 - ◆ acknowledgement of the benefits of incremental network investment such that operational and security benefits should be paid for by all system users.
- 5.18 WPL argued that Ofgem should not order the payment of any costs requested by Transco, which are claimed to be irrecoverable in circumstances where this arises due to a failure by Transco to perform the above obligations. WPL continued that it should not have to pay costs to Transco which should be recovered from all system users.
- 5.19 WPL stated that the appropriate mechanism to recover common fixed costs is to raise transportation charges which is both economically efficient reflecting true costs of the system to existing users and non-discriminatory as regards new customers. WPL argued that it should not be penalised for any failure by Transco to correctly calculate transportation costs.
- 5.20 WPL argued that it is not permissible for Transco to seek to recover from WPL the costs Transco incurs through its inability to supply WPL due to pressure constraints where those constraints would not be present but for existing users' use of the system.
- 5.21 WPL argued that Transco's pricing policy wholly disregards incremental system benefits and seeks to charge WPL for spare capacity which WPL will not use.
- 5.22 WPL noted that Transco has a 10-year planning horizon for pipelines that have a 40-year life span. WPL argued that although there may not be existing customers

¹⁰ The Gas Act 1986, section 9.

or Transco's 10-year projections do not currently envisage existing customers who are going to make immediate use of the redundant proportion of the capacity within the pipeline, it should not have to pay for the work particularly given the life span of pipelines. WPL recognised that security of supply may not convert into crude money, but added that it has an economic benefit as does any upgrading of facilities or increasing of facilities.

Proposed works

- 5.23 WPL argued that the downstream investment that Langage requires is that which is necessary to connect the load in a non-discriminatory manner ignoring the effect of existing users of the system. In this respect, WPL repeated its concern that it was being required to fund investment downstream of Kenn to the benefit of other system users and that it was being required to fund the creation of spare capacity within the downstream system.
- 5.24 WPL stated that it agrees that costs should be incurred economically at the most appropriate place i.e. where they are lowest.

Discussion

- 5.25 Transco and WPL have provided much supporting material that debates the cost of an NTS connection at Kenn as originally proposed by Transco. In summary, WPL considers Transco should be able to undertake the connection work for a significantly smaller sum than that proposed by Transco.
- 5.26 However, in the light of the selection of Lyneham as the relevant connection point, Ofgem believes that it is no longer required to make an assessment of the costs of the proposed work downstream of Kenn for the purposes of determining the connection charge. Instead, Ofgem is only required to determine the cost of connecting to the relevant connection point, namely Lyneham. The costs of this connection are treated as 'deemed' on the basis that they relate to a 'virtual' connection to the existing LTS pipeline system.
- 5.27 The fact that subsequent system works mean that this specific work is not required is not relevant in this respect to the determination of the costs of

connection as the costs of connection are those costs that Transco would incur if it were to make a connection to Lyneham as the system is currently configured.

- 5.28 Ofgem has carried out a technical analysis of these 'deemed' works. These include a 450 mm pipeline from Lyneham to WPL's AGI and tie ins to the AGIs. This analysis is attached in Appendix 2. This analysis determines the cost to be £513,800.

Ofgem's decision

- 5.29 Following technical analysis, attached in Appendix 2, the connection cost has been determined to be £513,800.

6. THE NATURE OF THE CONNECTION CHARGE - FIXED SUM OR COST PASS THROUGH

- 6.1 Having determined the connection cost, a further issue that arises is whether the connection charge determined by Ofgem should be fixed, or whether it should be variable and subject to cost pass-through provisions that assist in alleviating some or all the risks that Transco has identified throughout the determination process.

Transco's views

- 6.2 Transco has indicated that it manages project risks using a 3-phased iterative model with a 'live' risk schedule. The model is continually updated throughout the life of a project to reflect current risk status. Transco uses a model, which generates a cost distribution curve based on the risks that Transco assumes, their effect and the probability of the risk occurring. From the model, it is able to generate a 'P50' cost for which 50% of projects overspend and 50% underspend. Transco is also able to identify from the distribution curve a 'P80' costs for which only 20% of projects overspend.
- 6.3 Transco stated that from a construction point of view the proposed work has significant project risks, which relate in particular to the acquiring of rights over land (Compulsory Purchase Order (CPO) risks), risk associated with protected

species and potential environmental impact assessments that lead to uncertainties over both costs and time. Transco also described the process by which it identifies and quantifies risks (in terms of probability and cost impact) and develops a programme to manage these risks.

- 6.4 Transco explained that it uses an accredited risk management process and utilises industry expertise to assist it in risk management. Transco indicated that its risk management process had been fairly accurate in recent years. Transco believes that it demonstrated this point through the provision of information during the course of the determination process and at the oral hearing.
- 6.5 Transco commented on the specific risks associated with the project. It indicated that the uncertainties over the start date of the project had significant risk impacts particularly in the area of CPOs. It also emphasised both upstream and downstream risks stating that it was extremely concerned about the River Exe crossing. Transco commented that the risks associated with the project were very high although it was probably not the riskiest project Transco was undertaking. Transco also commented on the risks associated with having to deliver the relevant connection assets within a very short time scale. Transco stated that its P50 risk levels would fall if it had more time to execute a project between the start of the negotiation and the first gas on date.
- 6.6 Transco set out the agreements it would need to enter into to deliver the connection. These included the connection agreement, an ARCA, suitable commercial arrangements to recover any customer contribution in respect of works upstream of the charging point and a NExA.
- 6.7 Transco stated that the connection agreement would relate to payment for the work undertaken by Transco downstream of the connection point. Transco indicated that it wanted a cost pass through based connection agreement. Transco stated that the cost pass through terms could be capped on the basis of a P90 risk calculation. Transco stated that if something extraordinary happens, such as foot & mouth, cost pass through helps to alleviate some of the risk.
- 6.8 Transco argued that if a fixed price approach is used, a P50 estimate is inappropriate because it does not reflect the appropriate level of risk associated

with the project. Transco explained that P50 is used internally for budgeting and capital approval processes as the appropriate way of dealing with a large number of projects. Transco argued that when it conducts one-off tenders for jobs with external construction companies on a fixed price basis, P50 ceases to be appropriate. It indicated that if there was to be a fixed cost approach a risk reflective cost of at least P80 could be possible with the fixed cost being calculated immediately prior to the signing of the contract.

WPL's views

- 6.9 WPL stated that it was strongly opposed to the concept of a full pass through contract, as it gives neither Transco nor its contractors any incentives to control project costs and risks. Instead, WPL expressed a strong preference for a fixed price contract with an associated fixed 'gas-on' date of 1 October 2005 and an agreed price escalation index for any 1 October date for the next five years. WPL argued that the Authority had always in the past directed a fixed sum contribution rather than setting out the method by which Transco should calculate that sum. It added that Transco's frequent upwards revisions of the quoted costs provided no confidence that Transco would be able to manage these aspects of the project. WPL indicated that its financiers and lawyers considered that a fixed cost connection agreement and a valid ARCA were pre-requisites for the provision of finance for the project.
- 6.10 WPL expressed a strong preference for the determination to include the sum of its required contribution rather than simply the methodology for determining such sum. WPL stated that it had material concerns that a determination of the methodology would lead to unacceptable levels of uncertainty and create scope for future disputes between the parties and the possibility of further references to the Authority. WPL added that it has no confidence in Transco's ability to manage costs particularly in light of the variation of the costs that Transco has asked it to pay in the course of their discussions.
- 6.11 WPL stated that the major elements of risk identified by Transco affect upstream works for which WPL would not be expected to pay. WPL also stated that P50 should be used for a fixed cost approach for the process to be non-

discriminatory and that there was no reason why WPL should be treated any differently from Transco's internal approach to projects.

Discussion

- 6.12 Ofgem considers that the significance of the fixed cost or pass through question is reduced given the connection charge determined above. Nevertheless, Ofgem considers that Transco, as with other companies, should be able to provide its customers with the choice of fixed price contracts or variable price contracts. In the event that a customer selects a fixed cost contract, Transco should be held to these costs.
- 6.13 Against this view, however, Ofgem recognises that Transco, as a monopoly network owner and operator, does not benefit from the potentially higher rates of return that other companies would benefit from in similar circumstances. This would indicate that whilst a connection charge can be fixed at a customer's request, there may be circumstances where it is appropriate to allow Transco to recover additional costs associated with significant risks.
- 6.14 If Ofgem was required to determine a significant fixed connection charge, it would be necessary to determine this question, including whether to assess the level of the charge based on a P50, P80 or some other level of risk. This in itself would require a separate piece of analysis to verify, or otherwise test Transco's assumptions as to its risks, the probabilities of these risks eventuating and the outturn costs of managing these risks. However, in this instance, the size of the connection charge does not seem to merit this level of analysis.

Ofgem decision

- 6.15 Ofgem determines that the connection charge should be a fixed charge, at the level determined above.

7. CONTRACTUAL RISK MITIGATION

- 7.1 Separate to the level of the connection charge, this dispute has also raised issues regarding the appropriate level of contractual risk mitigation that should be

made available to Transco and WPL relating to the pipeline reinforcements that Transco needs to undertake to supply gas to WPL.

- 7.2 There are two significant risks faced by the parties in this context. First, the risk to Transco of WPL not delivering gas demand in line with current forecasts and, second, the risk to WPL of Transco being late with its connection.

Transco's views

- 7.3 Transco stated that the ARCA provides it with the assurance that the project is bona fide as the customer is effectively underwriting a relatively small proportion of the reinforcement bill with its commitment to pay a certain amount of money to Transco through or in lieu of transportation charges. Transco stated that certain works upstream of the charging point, identified as being necessary to meet the load requirements of the Langage project by the current expected 'gas-on' date of 1 October 2005, would expose it to a significant level of risk and that the management of such risk was not directly within its control. Transco explained that this risk was related specifically to matters including, but not limited to, the acquisition of necessary land access permissions over the proposed new pipeline routes, the CPO process and the obtaining of local planning authority consents. Such risks would impact upon Transco's ability to complete the necessary works by the current 'gas-on' date. Transco considered that it was not reasonable for it to be exposed to such risks, and that it was therefore seeking to limit its exposure to such risks through the provisions of the ARCA. These concerns have also been incorporated within Transco's recent ARCA consultation.
- 7.4 Transco stressed that the investments for the project are in the order of £100 million for both downstream and upstream works which it considers a sizeable sum requiring the appropriate assurances that the project is bona fide. Transco stated that approximately £5 million of this amount would be covered by an ARCA commitment.
- 7.5 Transco also stated that the ARCA also provides the customer the comfort that when they come to book NTS exit capacity 6 months prior to gas flow, that capacity will be available. Transco explained that through its network code, it

has liabilities for failing to make capacity available for offtakes. These liabilities are based on the equivalent of the exit charge. Transco stated that it would effectively issue a refund of the exit charges. Transco stated that it would not be able to recover these refunds through its price control. Transco stated that in this case the refunds would amount to approximately £19,000 per day.

7.6 Transco explained that the ARCA has been roughly calculated on the basis of one year's transportation charges that have to be paid over a two-year period. Transco added that there is a proposed extended form of ARCA which is actually a 'bolt on', the operation of which is exactly the same as the current 2 year ARCA but prevents the customer switching from firm to interruptible capacity arrangements for the term of the agreement i.e. up to 5 years from the contract period start date.

7.7 Transco confirmed that it was now working for a gas-on date of October 2005 rather than October 2004. Transco stated that to give it time to manage the risks of the project, it would want to start the process as soon as possible but at the latest by June 2003, given the time that may be needed to manage the CPO process. Transco indicated that this meant that the construction agreement setting out the work to be done downstream of the connection point and the ARCA would need to be signed by June 2003. Transco added that the NExA setting out the operational parameters for how the load would operate could be signed later than that. Transco stated, however, that any changes to the customer's requirements in respect of operating parameters after the finalisation of any ARCA and connection agreement could impact significantly upon Transco's optimum reinforcement solution and, as a consequence, could result in the need for further works.

WPL's views

7.8 In terms of the ARCA, WPL commented that it provides Transco with a level of risk mitigation in the event that the power station is not commissioned in circumstances where Transco has undertaken the necessary connection work.

Discussion

- 7.9 As noted above, there are two significant risks that are faced by Transco and WPL in relation to this matter. First, the risk to Transco that the power station will not be constructed, will not consume gas or will not consume as much gas as it was forecast to consume notwithstanding that Transco may have undertaken significant reinforcement of its pipeline system. In this context, Transco faces the risk that it will not be able to recover the costs of reinforcement through transportation charges. Second, WPL faces the risk that Transco is late in delivering the reinforcements necessary to deliver the gas thereby creating potentially considerable costs for WPL.
- 7.10 It is important to emphasise at the outset that the issue of contractual risk mitigation is not relevant to the nature or level of the connection charge payable by WPL. Instead, risk mitigation should be assessed within Transco's transportation charging framework at exit, as it currently exists.
- 7.11 Under the existing exit capacity framework, Transco is able to enter into an ARCA with a proposed connecting load to alleviate the risk that the load does not take gas. The ARCA represents a mechanism that provides Transco with a form of contractual risk mitigation. In particular, it enables Transco to rely on a certain amount of income from general transportation charges to manage this risk and would guarantee one year's transportation revenue through exit capacity charges even if gas does not flow.
- 7.12 Ofgem has previously made it clear that ARCAs are only suitable in limited circumstances, namely where a new connecting load is significantly more risky to Transco than the majority of loads. Therefore if Transco were able to demonstrate an above normal level of risk, then Ofgem would consider approving an ARCA. In this instance, Ofgem considers that the Langage load is riskier than the overall portfolio of Transco loads and considers that an ARCA agreement of at least one year's transportation charges is appropriate.
- 7.13 Ofgem, however, notes that the continuation of ARCAs within the existing exit capacity regime is currently being reviewed in the context of discussions to reform the current exit capacity arrangements. In this respect, it may be that

ARCAs may become unnecessary depending on the form of any revised exit capacity framework. For example, ARCAs may not be required to the extent that shippers and/or customers are able to book exit capacity rights via non-discriminatory long-term allocations that exceed one year. In these circumstances, Transco would be able to undertake incremental investment on the basis of funding for that investment through long-term capacity bookings.

7.14 With regards to WPL's risk, under the terms of an ARCA Transco would reimburse the exit charges that would otherwise have been payable for each day that Transco is late in connecting the site and delivering the necessary reinforcements to its pipeline system to enable gas to be delivered to Langage. Ofgem accepts that this would provide some contractual risk mitigation to WPL. However, Ofgem would also note that the level of contractual risk mitigation available to a connecting party or its shipper associated with any failure to deliver transmission capacity is also currently the subject of the review of the exit capacity arrangements.

7.15 As noted above, under the new exit regime, customers, such as WPL, or their shipper representatives may be able to book exit capacity rights via non-discriminatory long-term allocations that exceed one year. In the event that Transco was unable to provide the capacity that had been booked, that capacity would be bought back such that the connecting party is appropriately compensated at the level of its opportunity costs. This could be a more appropriate compensatory and risk mitigation mechanism than the present arrangements that exist under the terms of the ARCA.

Ofgem's decision

7.16 Ofgem considers that a two-year ARCA guaranteeing the payment of one year's exit capacity charges is appropriate.

8. IMPLICATIONS OF THE CONNECTION CHARGE DETERMINATION

8.1 Ofgem has determined a connection charge (£513,800) that is significantly less than that suggested by either Transco or WPL. This has some implications that are explored below.

The customer contribution and the economic test

- 8.2 Transco has explained in some detail that it does not believe that this connection satisfies the requirements of section 9 of the Gas Act, that it is required to make connections only when it is economical to do so.
- 8.3 Transco has indicated that the load does not satisfy its economic test and has explained that its current transportation charges in the relevant exit zone, SW3, would not enable it to obtain the revenue required to make this investment economic. Transco's economic test calculation also incorporates an estimate of entry charges and assumes a life of 15 years for the assets. The calculation also assumes that the structure of transportation charges does not alter in that time.
- 8.4 Ofgem does not consider that Transco's economic test is relevant for the calculation of a connection charge. The level of any connection charge is determined by the shallow connection test, as outlined above. Whilst the economic test might show that a particular connection is not economic when considered in the context of Transco's total costs and investment programme, it should not be used to supplement the connection charge with a customer contribution.
- 8.5 Instead, Ofgem considers that Transco should be able to recover the costs associated with the pipeline reinforcements through its general transportation charges. In this respect, Ofgem notes that the pipeline investments associated with the Langage power station have already been included in Transco's capital expenditure requirements for the current price control from 1 April 2002 to 31 March 2007.
- 8.6 Transco has stated that the pipeline reinforcements that are associated with the connection are 'uneconomic' because the transportation exit capacity charges that it would levy would not recover the costs of undertaking the investment. In this context, the application of the shallow connection policy requires that any shortfall in revenue should not be recovered from the connection charge but instead through transportation charges. In this regard, Ofgem would note that Transco is able to adjust its transportation charges under its GT licence.

Therefore, it is possible for Transco, by reassessing and varying its transportation charges, to determine a level of income that would enable it to recover the costs of undertaking an investment.¹¹

- 8.7 In this context, Transco has a number of options including funding the costs of the investment through SW3 exit charges, a Langage specific exit charge, all exit charges or some combination of these. Ofgem would note that many power stations currently connected to Transco's system have their own exit point. Ofgem considers that this is appropriate within the framework of the current exit regime as it provides some signals of the costs of reinforcement. As such, Ofgem considers that it is reasonable to expect that WPL be required to pay a proportion of the costs of reinforcement through a Langage specific charge. Ofgem also, however, recognises that the reinforcements also provide some benefits to existing SW3 users. In this respect it seems appropriate that these users bear some of the costs of the network reinforcement.
- 8.8 Whilst the nature of any possible changes is uncertain Transco has estimated that it could increase the charges in SW3 by 21% in order that the exit charges payable by customers within this zone would recover a certain proportion of the investment necessary. In addition, Transco has estimated that a Langage specific exit charge would be 3% higher than this new proposed SW3 charge.
- 8.9 Such a significant change in transportation charges might seem excessive. First, Ofgem questions whether Transco's charging methodology is sufficiently robust to justify such a significant change. Second, it may be appropriate that transportation charges to Langage should reflect more of the reinforcement costs identified by Transco. Third, significant changes of this order do not seem appropriate given the exit reform that is expected in 2004.

¹¹ It should be noted in this context that whether or not a particular investment is economic is a matter for consideration through normal price control processes. As outlined above, Ofgem would note that the investments associated with the Langage project were taken into consideration in the determination of Transco's allowed price control revenue for the period 1 April 2002 to 31 March 2007.

- 8.10 Ofgem would note that these estimations indicate that the Langage project has major implications for SW3 customers in terms of their transportation charges. As such, were Transco to propose changes of this nature, Ofgem would expect Transco to consult on these changes. The purpose of any such consultation would be to determine whether Transco's charging methodology was effectively targeting the costs of network reinforcements.
- 8.11 In the longer term, Ofgem would expect that reforms to the exit capacity arrangements would enable shippers and potentially customers to purchase longer term exit capacity rights via long-term exit capacity allocations. These allocations should signal to Transco whether investment is required at particular points in the network. The signals from any such allocations should also assist Transco in determining whether or not investments are efficient on an ex ante basis and should also assist Ofgem in assessing investments through future price control processes.
- 8.12 As part of the process for obtaining an estimate for the costs of any connection from Transco, WPL has agreed to fund feasibility studies, amounting to approximately £2.5m. Ofgem does not accept that it is appropriate for Transco to recover the costs of these studies through connection charges as they relate to general system investment and reinforcements. As such, Transco should recoup the costs of these studies through transportation charges. In these circumstances it would seem appropriate for Transco to offset the costs of the studies from their transportation charge calculations for the Langage zone.

9. DECISION

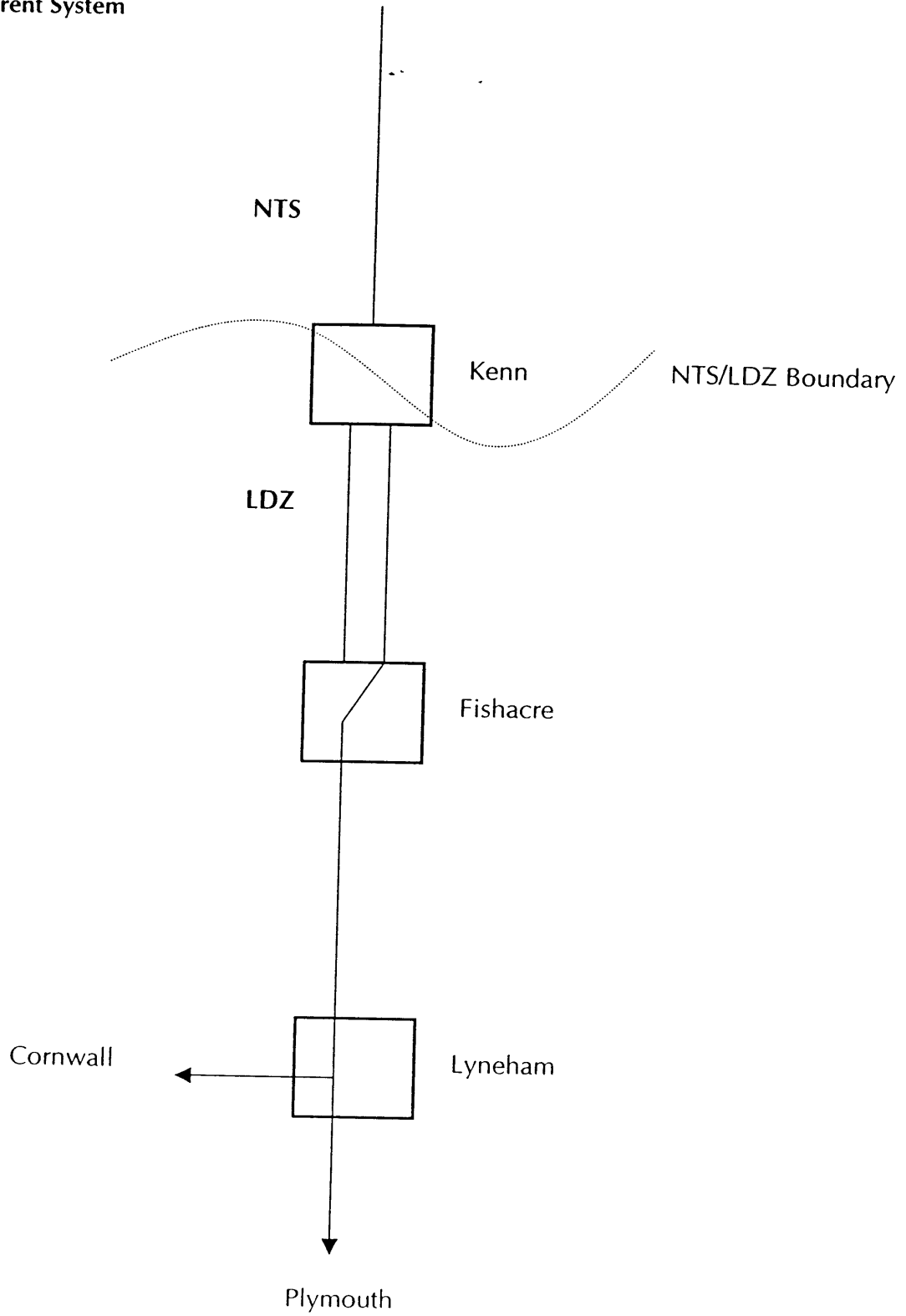
- 9.1 The adoption of the shallow connection policy with respect to gas connections has followed extensive consultation and has received wide support by industry participants. Ofgem considers that this determination is consistent with the shallow connection policy.

9.2 On the basis of the application of this policy Ofgem has determined the following:

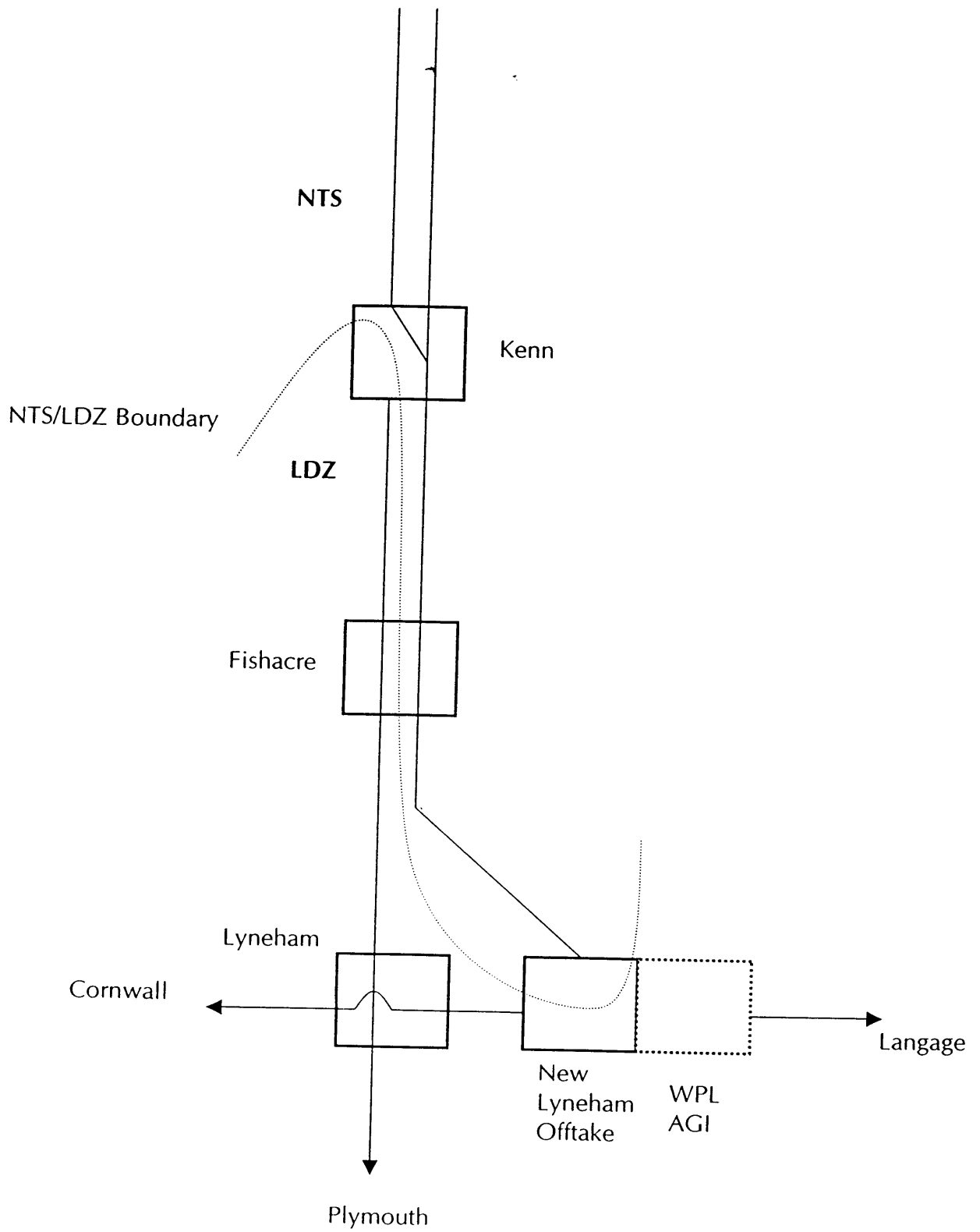
- ◆ that the connection point for connection charging purposes is the existing Lyneham AGI;
- ◆ that the connection charge payable by WPL is £513,800 and that WPL be refunded the payments it made to Transco (approximately £2.5million) in respect of the feasibility studies that were obtained regarding the proposed network reinforcements;
- ◆ that the connection charge is not subject to variation; and
- ◆ that it is appropriate for the parties to enter into a 2 year ARCA for one year's transportation charges.

Appendix 1 PIPELINE FOR LANGAGE POWER STATION

Current System



System following Transco's Proposed reinforcements



Appendix 2 TECHNICAL REPORT ON THE COST OF CONNECTION

Background

WPL Power Ltd. (WPL) plans to construct a new power station at Langage Energy Park. This report investigates the costs of a connection between Transco plc's (Transco) gas transportation network and the proposed power station. WPL has requested Transco to provide a new connection from Transco's network to WPL's proposed Above Ground Installation (AGI) at Lyneham, from which WPL will construct a pipeline to the power station.

Transco has proposed the following development work downstream of its NTS AGI at Kenn that it considers necessary in order to connect Langage power station to its network:

- ◆ re-rating an existing 600-mm pipeline running from Kenn to Fishacre in order to allow it to operate to NTS standards;
- ◆ a new 39 km, 600 mm pipeline with a design pressure of 75 bar from Fishacre to Lyneham;
- ◆ modification of the existing AGIs at Kenn, Fishacre & Lyneham;
- ◆ a new AGI at Lyneham, adjacent to the AGI proposed by WPL; and
- ◆ a new pipeline from Transco's new AGI at Lyneham to Transco's existing AGI at Lyneham.

Transco has advised that reinforcement works upstream of Kenn will be required.

I was asked in my capacity as Technical Advisor to Ofgem to investigate the following:

- a) the appropriate point of connection for charging purposes;
- b) the cost of connection from the appropriate point of connection for charging purposes to the customer;
- c) the appropriate schedule for the work; and
- d) the implications of using a cost pass through connections agreement.

a) The appropriate point of connection

The appropriate point of connection for charging purposes is defined as the point where the existing system has sufficient capacity to meet the connecting load disregarding existing loads at that point¹.

If Transco's existing network is operated without any other users connected then the load for Langage power station can be adequately supplied from Transco's existing Above Ground Installation (AGI) at Lyneham. This is the nearest point on the existing network that could adequately support the load. This is demonstrated without need for detailed calculation, as it can be seen by inspection of the size of the peak loads on the system and comparing these with the much smaller load for Langage.

¹ 'Determination of the Direction in respect of the Modification of the Transco pipeline system for the purposes of conveying gas to Barry power station' Ofgas, March 1998

b) The cost of connection

(i) Reinforcements

It is appropriate to design the reinforcements and the connection in such a manner that the lowest net present overall cost is achieved when loads to all current and anticipated network users are taken into account.

The works proposed by Transco provide sufficient capacity to supply gas to Langage and to supply gas to other foreseen users over the ten-year planning period. No alternative design that would lead to lower overall costs has been identified. The proposed reinforcements are therefore consistent with the policy stated in the determination.

Transco's Network Code specifies a minimum pressure of 25 bar for NTS connections. Transco's proposed reinforcements provide a normal minimum operating pressure 38 bar at the proposed Langage offtake point.

The cost of reinforcement works, given the proximity of the existing and proposed Lyneham AGIs, would be very similar to those proposed by Transco, if the new pipeline were terminated at the existing Lyneham AGI instead of at the new Lyneham AGI.

(ii) Connection

WPL has indicated that it proposes to construct a new pipeline from Langage Energy Park to a new AGI at Lyneham. It follows that the connection is between Transco's existing AGI at Lyneham (the appropriate point of connection) and WPL's proposed AGI at Lyneham.

Sizing of the connection is based on the following:

- A pressure of 25 bar at WPL's Lyneham AGI;
- A pipeline length of 400 metres;
- A pipeline design pressure of 75 bar;
- A design load of 153,000 standard cubic metres per hour; and
- Gas properties as indicated in Transco's submission.

WPL has proposed installing a 750mm pipeline from its Lyneham AGI to its new power station. WPL explained that this pipeline was oversized for normal flow conditions for a number of reasons. One of the reasons was to minimise pressure drop. WPL stated that it had specified a maximum pressure drop across its AGI of 1.5 bar to its contractor.

Transco has proposed a 300mm pipe to connect its new Lyneham AGI to WPL's AGI.

A 450mm pipeline between the existing AGI at Lyneham and WPL's AGI is appropriate for the connection. The connection includes connecting the pipeline to the existing Lyneham AGI and the costs of terminating the pipeline at WPL's proposed AGI at Lyneham.

The scope of work for the connection is therefore:

A 400m long, 450mm diameter pipeline with a design pressure of 75 bar from the new Lyneham AGI to Transco's existing Lyneham AGI.

Tie in to new Lyneham AGI facility:

Provision for temporary pig trap,
Temporary pig trap,
Valves, instrumentation, etc.,
Contribution to civil works, fencing, etc.

Tie in to existing AGI:
Provision for temporary pig trap,
Temporary pig trap,
Valves, instrumentation, etc.,
Associated minor civil works, fencing, etc.

(iii) Cost estimate

The cost is determined using the principle that Transco should recover the costs that it would actually pay if it were to construct the connection.

The connection work will be performed as part of a much larger project managed by Transco that will include the reinforcement work. This means that separate project mobilisation and demobilisation costs that make short pipeline lengths relatively expensive should not apply in this instance.

Transco has stated that it uses the P50 results from its cost estimating model for internal planning purposes. This P50 estimate is the median level of cost, where an equal number of projects are expected to exceed and undershoot the cost estimate. The distribution curve for pipeline project costs is skewed and the median cost estimate would not provide an appropriate method of charging as, on average, Transco would be expected to incur more expenditure on behalf of new customers than it would be expected to recover. This would discriminate against existing customers. The appropriate cost is the mean, or expectation cost, of the project not the median. When the mean project cost is applied, Transco would expect to recover its costs when an infinite number of projects have been completed.

Based on the above, the cost of the connection is £513,800, including £38,500 of pre-project study costs.

c) Schedule

It is appropriate to conduct major reinforcement works during the summer months. In order to achieve a first gas date of October, it is necessary to commence construction in April of the same year. A 12-month environmental survey is appropriate and that this must be completed before construction commences. Materials must be purchased and contractors mobilised in advance of the start of construction.

In the current regulatory and contracting environment, a project timescale of 20 months from financial commitment to first gas is appropriate.

d) Cost pass through

The deemed connection will not physically exist and will not be built; although it is intended that a very similar pipeline will deliver gas from Transco's new AGI adjacent to WPL's proposed AGI to Transco's existing AGI at Lyneham. Because the deemed pipeline will not be built it is not possible to use a cost pass through contract. The merits of a pass through contract are not considered further.