

**DETERMINATION BY THE GAS AND ELECTRICITY MARKETS AUTHORITY OF A DISPUTE REFERRED TO IT UNDER SECTION 23 OF THE ELECTRICITY ACT 1989 CONCERNING THE CHARGES PROPOSED FOR A LOAD FEASIBILITY STUDY AT THE PREMISES.**

**1 INTRODUCTION**

- 1.1 The Gas and Electricity Markets Authority ("the Authority") has been asked by [REDACTED] ("the Customer's Agent"), acting on behalf of [REDACTED] ("the Customer") to determine a dispute between the Customer and [REDACTED] ("the Company"). The dispute concerns the charge for a Load Feasibility Study undertaken for [REDACTED] ("the Premises").
- 1.2 The dispute has been referred to the Authority for determination under Section 23 of the Electricity Act 1989 ("the Act"). The Authority is required to determine such disputes once a customer has requested that it is to do so. The scope of the determination is therefore limited to the reasonableness of charging for the Load Feasibility Study.
- 1.3 (Note: The Customer's Agent requested the connection at the Premises at the same time as requesting a connection at other premises for another customer. The correspondence provided by both parties in relation to this determination also refers to the request made by the Customer's Agent on behalf of the other customer. References in this determination to "System Study" or "System Studies" are references to the Load Feasibility Study for the Customer).

**2 BACKGROUND**

- 2.1 The Customer's Agent has been requested to make observations and recommendations regarding the charges that have been imposed by the Company with regard to the provision of Point of Connection (PoC) information with relation to the Premises within the Company's area of responsibility.
- 2.2 The connection was requested independently during the period September / October 2006 for a multiple small connection metered at low voltage but with a common PoC at high voltage (at 11kV) to proposed commercial units with total loadings in the order of 1.9MVA.

- 2.3 The Customer's Agent maintains that there are no unusual or disruptive load characteristics within the new business connection that would entail a System Study at either low or high voltage connection points.
- 2.4 The Company wrote to the Customer's Agent on 12 January 2007, stating that the charge levied for the System Study is to cover work that has to be undertaken before a connection can take place. The Company explained that should the connection proceed, the Customer would not be charged for the activity again and that this would be reflected in the connection offer. The Company also stated that should the Customer not wish to proceed with the connection, the payment for the System Study would not be refunded. The Company pointed out that the charges are detailed in their LC4 Statement.
- 2.5 The Company pointed out that the 33kV systems that supply the primary substations that are to feed the Customer's proposed connection are both meshed networks. The Company explained that as a characteristic of meshed systems, the capacity availability differs depending upon where the connection is made and that the capacity is sensitive to changes in demand across the network. The company pointed out that this characteristic has made the Customer's load connection enquiry complex. The Company further pointed out that upon receiving the Customer's Agent's enquiry, initial studies were undertaken by the Company's System Development Team, which concluded that further study work would be required to ascertain what, if any, reinforcement would be required to facilitate the connections. The Company stated that it was not possible at this time to be prescriptive on the amount of spare capacity.
- 2.6 It was the Customer's Agent's view that spare capacity on the 33kV network should have been identified and definable as part of the SLC25 statement, assuming that it was fit for purpose, and that spare capacity on the HV network should have been identified as part of the PoC study, (for which a separate fee was indeed acceptable and valid). The Customer's Agent suggests that there appears to be a 'blurring' of the works for which PoC fees are both valid and acceptable and for 'network study fees at 33kV' which should otherwise be covered by the SLC25 works.
- 2.7 The Company stated that their SLC25 Statement details the transformer loads and the transformer nameplate ratings only. The Company pointed out that this qualification is clearly stated in the Statement, and it is also stated that there may be other issues that constrain the firm capacity quoted. The company explained that once the System Study has been completed, the Company would confirm whether the system could accommodate the

Customer's connection without reinforcements. If reinforcements were required, the Company is to confirm its extent. It was the Customer's Agent's view that a properly constructed SLC25 statement should have provided all of the above information without the necessity to undertake a System Technical study for this or any other potential load based connection. Likewise, if the Distribution Network Operator (DNO) was unsure of what capacity was available on the network then it would be fair to assume every potential new connection enquiry would be subject to a network study charge and in the view of the Customer's Agent this is an unacceptable stance.

- 2.8 The Customer's Agent states that it wrote to energywatch<sup>1</sup> on 29 December 2006 requesting a formal determination, who in turn wrote to the Customer's Agent on 26 March 2007, recommending that the Customer pays on a without prejudice basis to ensure that a quote can be given.
- 2.9 The Customer's Agent wrote to energywatch on 24 April 2007 requesting a formal determination.
- 2.10 The request for a formal determination was received by the Office of Gas and Electricity Markets ("Ofgem")<sup>2</sup> on 30 April 2007.
- 2.11 The Customer's Agent's engineering consultants provided a cheque to the Company on 27 April 2007 for the full amount on the basis that the Company understands that should the determination agree with the Customer, the Company agree to pay back the amount in full.

### **3 VIEWS OF THE CUSTOMER'S AGENT**

- 3.1 The Customer's Agent refers the Authority to the [REDACTED]  
[REDACTED]  
[REDACTED] In relation to the Premises, the Customer's Agent states that following payment of the requested amount, the Company produced a technical report dated 11 May 2007 for the scheme at the Premises. Similarly, the Customer's Agent points out that the conclusion of the technical report stated that no up-stream reinforcement would be required at any voltage in order to accept the connection of the additional load.
- 3.2 The Customer's Agent refers the Authority to the summary contained within their original report dated 22 January 2007, which the Customer's Agent points

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<sup>1</sup> The Gas and Electricity Consumer Council, which considers and reviews gas and electricity consumer matters.

<sup>2</sup> Ofgem is the office of the Authority.

out has been updated on 24 May 2007. The Customer's Agent points out that it is pertinent to note that:

- (1) The individual 'property' connections for the scheme are at low voltage;
- (2) The point of common coupling has been confirmed, as being at high voltage (11 or 6.6KV);
- (3) That there are no issues with transformation capacities on the transformers at the relevant Primary Substations;
- (4) That there are no issues on the 33kV Primary Circuits, and for which reinforcement would otherwise have been required;
- (5) That the Company have accepted that the costs of any 33kV reinforcement subsequently identified would be apportioned under the existing apportionment rules. Since there is no requirement for any reinforcement there are therefore no additional reinforcement charges;
- (6) That, due to the new business load requirements, the costs associated with any identified reinforcement works would fall (based on the current apportionment rules) predominately into the reinforcement category;
- (7) That the Company have charged the 'new business customers' for full costs relating to the System Studies<sup>3</sup> to prove whether or not reinforcement may (or may not) be required; and

3.3 The Customer's Agent states that the Company have attempted to justify the need for a report, and subsequent charges, on the basis that 33kV systems are a complex mesh connection. The Customer's Agent suggests that mesh connections are not unusual and should, in any event, be modelled for normal system outages, load transfers etc as part of any normal basic network strategy.

3.4 The Customer's Agent adds that whilst it could be accepted that a System Study could and should be applicable where there is a requirement to determine the effect of generation or disturbing / disruptive loads, they would suggest that it is unacceptable to undertake further studies (other than normal PoC studies for which separate charges are payable) whilst the new load is:-

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<sup>3</sup> This includes the System Study for the Customer

- Minimal in value;
- For which there is no disturbing load element; and
- For which a properly constructed SLC25 Statement should have taken due cognisance.

3.5 The Customer's Agent refers to the proposed use of SLC25 statements explaining that in the instances above, the required information can only be derived from the DNO; consequently there is a monopoly on the provision of such basic design information. The Customer's Agent raises concern that the Company considers that they are not in a position to determine whether such relatively small incremental loads can be accepted onto their Primary systems without the requirement for separate (and individually priced) design studies.

3.6 The Customer's Agent refers to the Company's obligations under SLC25 and raises concern that the Company has not met its obligations under SLC25, in particular, clause 4(e) which relates to the identification of those parts of the licensee's distribution system which are likely to reach the limit of their capability during the succeeding 5 year period, including those parts which may experience thermal overloading, voltage problems or excess fault levels, and clause 4(f) which refer to the licensee's plans to alleviate or rectify any predicted shortcomings in the operation and/or capability of its distribution system.

3.7 The Customer's Agent points out that the questions must therefore be posed as to the relevance of the SLC25 Statements and what value of connections are allowed before individual technical studies are considered to be a requirement. The Customer's Agent has also brought to the attention of Ofgem the relevant clauses with SLC25 which, it is considered, would have assisted both parties in the design and connection process; had the SLC25 statement been available, accurate and up to date. The Customer's Agent has concluded that this was not the case.

3.8 The Customer's Agent states that if they are to accept the Company's statement at face value in that they do not know what 'spare capacity' is available on their Primary Networks, then they can only assume that network study will be required (with associated costs to each and every potential customer) for each and every potential connection. The Customer's Agent points out that this has imposed unnecessary delays and costs to their client and other potential customers.

#### **4 VIEWS OF THE COMPANY**

- 4.1 The Company points out that they understand that the Customer's Agent accepts that a System Study is required for generation connections and where there are any sort of "disruptive" loads. The Company further points out that they understand that the Customer's Agent does not believe that charges should be made for System Studies where they are required for demand connections such as those requested by their two clients.
- 4.2 The Company points out that they have received applications for new connections at the Premises and another site. The Company explains that applications were received from three Independent Connections Providers (ICPs) including the Customer's Agent, for requested loads ranging from 1.5MVA to 1.9MVA. The Company points out that the Customer's Agent's request was for seven offices, one storage unit and one speculative Industrial unit. The Customer's Agent requested confirmation that the new connections and capacity was available and a firm quotation under Competition in Connections for the new load.
- 4.3 The Company refers the Authority to a timeline outlining the following events:
- 12 October 2006: Application received from Customer's Agent for the Premises (dated 11 October);
  - 20 October 2006: Need for System Study identified for the Premises and for the other site and letter sent to Customer's Agent;
  - 23 October 2006: Need for System Study identified for the Premises. Letter sent to the consulting engineer and emails to each of the ICPs;
  - January 2007: Dialogue between Customer's Agent and the Company;
  - 7 February 2007: energywatch complaint received;
  - 15 February 2007: Response from the Company to energywatch complaint directly to Customer's Agent (as requested by energywatch). No further correspondence received from Customer's Agent on the matter;
  - 11 May 2007: System Study for the Premises sent to Customer's Agent.

- 4.4 The Company states that the charges are for carrying out the System Study on the 33kV network associated with the application for the Premises. The Company points out that these are necessary to determine the optimum PoC and what (if any) reinforcement is required to allow the connection to be made.
- 4.5 The Company explains that they have a number of indicative charges that are included in their 'Statement of Methodology and Charges for Connection to [REDACTED] Distribution Network' which is published on their website (and which is referred to as an extract as Appendix 1 of the supporting submission of facts). The Company states that the statement presents indicative charges for studies associated with generation connections. They further state that for demand projects, prices are available on application. In most circumstances, these are quoted in line with the indicative prices for generation projects of the same size. The Company points out that this provides certainty to the applicant over the costs, before the work is started.
- 4.6 The Company states that the jobs (for the Premises and the other site) were 1.5MVA and 1.9MVA and therefore fell into the System Study charges for capacity requests between 1MVA and 4MVA. The Company maintains that whilst the table refers to generation capacity, section 7.6 of their statement clearly indicates that they also apply to demand requests as well: *"A System Study is required for all generation connection applications and for large and / or complex demand connection applications"*.
- 4.7 The Company maintains that for all new connections over 1MW, they make an initial assessment to consider if there are any capacity issues. They add that if there are no capacity issues, they will progress the application. If there are any apparent capacity shortfalls, then they will request payment for a formal study.
- 4.8 The Company states that in this case for this connection the relevant networks are 33kV meshed network and therefore have inherent characteristics that make any connection to them complex.
- 4.9 The Company points out that it therefore needs further modelling and study to determine the impact of connecting any new load. The Company explains that this is because the impedance properties of the circuits making up the interconnected (or "meshed") network means that the additional demand will potentially have an impact on circuits in the mesh other than the ones that the load is directly connected to.

- 4.10 The Company states that initial studies were undertaken to see if the load could be accommodated simply into the two meshed networks, at the Premises and the other site. These studies indicated that further work was required and it was at this point that they wrote to the Customer's Agent indicating that a charge was to be made to the Customer. The Company points out that although it is not their normal practice, in this instance the Company provided the detail obtained from the initial studies to the Customer's Agent (free of charge) to help the Customer's Agent understanding of why the Company believed the System Study was necessary.
- 4.11 The Company refers the Authority to the extract of the 'Statement of Methodology and Charges for Connection to the Company's Electricity Distribution Network', which the Company points out makes clear reference to these charges in section 7.6. The Company further points out that this statement follows from the provisions of LC4B and is approved by Ofgem prior to its publication and adoption. For this reason the Company maintains that it is vital for them to charge.
- 4.12 The Company refer to an email dated 24 April 2007 where the Customer's Agent made reference to "apparent perceived contradictory position provided within the Distribution Code". The Company states that they are unclear as to what the Customer's Agent is referring to. The Company considers that the Distribution Code is quite clear, pointing out that DPC 1.7 'Status of Planning Data' includes the paragraph "If at this stage the User requires further information then the DNO will request Standard Planning Data from the User and provide a feasibility assessment identifying items of significant cost to the extent permitted by the information provided by the User. In accordance with the DNO's Statement of Charges, a charge will be payable by any potential User for such an assessment".
- 4.13 The Company refer the Authority to the Guide to the Distribution Code section 5.4.3 in relation to Charges for Information which contains the following: "A provision in the Distribution Licence allows the DNO to charge for providing such Planning Statements. These charges relate to reasonable costs in providing the statement. The exact procedure is as follows:
- (a) The DNO may within 10 days of receipt of a request provide an estimate of its reasonable costs in preparing any statement.
  - (b) Provision of the requested information is conditional on the requester agreeing to pay the amount estimated or such other amount as Ofgem may direct, on application of the DNO or the person

*requesting such statement. On payment of the DNO's estimated costs or, such other amount as Ofgem may direct.*

*(c) The DNO must provide the information within 28 days of the date of the request, or if the DNO has provided an estimated cost for providing data, within 28 days of the date on which agreement to pay the charge is received."*

- 4.14 The Company maintains that this Study is necessary to determine both the appropriate PoC and whether any reinforcement would be required, they believe that it is essential work to allow any future connection offer to be made. The Company points out that as these require a significant amount of study work, they believe that it is appropriate that they are charged separately to the Customer who has instigated the work. The Company states that the fact that these developments are speculative, it strengthens that argument. If there was significant reinforcement identified to provide the new connection then either or both projects may not be commercially viable and would not go ahead. The Company maintains that it is more appropriate to make charges more reflective of the actual works triggered by a connection applicant. The Company points out that the alternative would be to spread such costs more generally, although it would be less efficient and could cause an unreasonable burden on other applicants.
- 4.15 The Company accepts that if any reinforcement costs were required in providing this connection then the Company's cost apportionment rules would apply. As this is a speculative application this would mean that the reinforcement costs would be fully chargeable to the Customer as detailed in section 6.26 of the Company's Statement of Methodology and Charges.
- 4.16 The Company states that it is their policy to require payment up front for such System Studies and points out that this is explicit in their statement of charges (section 7.7 of the Statement of Methodology and Charges). The Company refers the Authority to Appendix 1 of the supporting submission of facts. The Company states that they undertook the study work in advance of receipt of the payment to ensure that the Customer was not disadvantaged by any dispute process. The Company adds that it did not release the study findings until payment was received, in line with its policy.
- 4.17 The Company maintains that they were following their published policy which has been approved by Ofgem.

- 4.18 The Company believes the work was necessary in order for them to provide a PoC and establish what other reinforcement costs would be necessary. In this instance, there were issues with the 33kV network which was the limiting factor and not simply the primary transformer capacity. During the course of the study, some other planned load transfers were identified. Taking these into account it became clear that further reinforcement was not necessary to accommodate the application from the customer. Without the study, this information would not have been evident to the engineer working on the scheme, and the connection charge to the company would have been higher.
- 4.19 The Company adds that they consider it is appropriate for a separate charge to be made for such System Studies and that the level of the charges made were reasonable.
- 4.20 The Company maintains that their Long Term Development Statement (LTDS) has been developed to meet the needs of SLC25. Its purpose is to provide technical information to assist existing and future users of our networks to assess opportunities for making new or additional use of its network. The LTDS gives a general overview of the Company's grid and primary network but is not intended to do away with the need for bespoke investigations for applications. The Company maintains that its LTDS has been developed in accordance with guidance provided by Ofgem and has been reviewed annually by Ofgem since its introduction. Ofgem has confirmed that the Company's LTDS complies with Ofgem's guidance titled "Form of Long Term Development Statement." The company therefore maintains that its LTDS complies with SLC 25.
- 4.21 The Company believes that it complies with SLC25 clause 4(e). The Company's LTDS contains 33kV Substation Maximum Load Information which details the existing substation firm capacity, maximum loads for the previous year and forecast load information for the following five years for each circuit out of a bulk supply point. In addition, notes are used to indicate any capacity issues eg "scheme to be raised to reinforce the network", "firm capacity exceeded at time of peak load - transfers are available on the lower voltage network" or "firm capacity expected to be exceeded in the next 5 years - load to be monitored".
- 4.22 The Company believes that it complies with SLC25 clause 4(f). As well as the notes outlined in 4.21, there is a list of network development proposals included as part of its LTDS. This list includes those proposals for the 33kV and 132kV networks which have received approval on or before 31 August each year, but had not been commissioned by that date. This list includes discretionary capital investment proposals that have received internal financial

approval and proposals related to customer connections where a connection offer has been accepted. This list is refreshed annually as part of the LTDS review process.

- 4.23 The Company welcomes any comments on the scope of SLC25 and is happy to work with Ofgem in developing it further, consistently across the industry but believes that these issues are out of scope of this determination.

## **5 STATUTORY OBLIGATIONS**

5.1 Under section 19(1) of the Act, an electricity distributor may require any expenses reasonably incurred in providing any electric line or electric plant to be defrayed by the person requiring the connection to such an extent as is reasonable in all the circumstances. Under section 19(4) of the Act, such expenses include the capitalised value of any expenses likely to be incurred in continuing to provide the electric line or electric plant.

5.2 Any dispute arising under sections 16 to 21 of the Act, between an electricity distributor and a person requiring a supply of electricity may be referred to the Authority under Section 23 of the Act for determination.

5.3 The works undertaken is a connection that falls within the statutory obligations set out above.

## **6 DISCUSSION/CONCLUSIONS**

6.1 Both parties have agreed in writing that their arguments are reasonably reflected in Sections 3 and 4 of this document. An oral hearing meeting took place on 4 September 2007 and both parties presented their views to the Decision Maker. Both parties have also agreed that their arguments are reflected in the oral hearing minutes.

6.2 The Authority has carefully considered the arguments reflected in Sections 2, 3 and 4 of this document, and taken into consideration the oral hearing discussion and written correspondence provided by both parties.

6.3 The Authority has identified a number of issues arising from this determination that are set out and discussed below. The main issue that we consider pertinent to this determination is discussed under Reasonableness of Charging for a System Study.

## **Long term development statements**

6.4 We note the Customer's Agents comments (paragraphs 3.6 and 3.7) and the Company's comments (paragraphs 4.20, 4.21 and 4.22) regarding Long Term Development Statements. The Authority considers that the LTDS gives the long term view of development and use of the Company's distribution system and therefore this issue has no impact on the Authority's decision about the reasonableness of charging for the System Study.

## **When will a connection request require a System Study?**

6.5 The Company asserts that power flows on meshed networks can be more difficult to assess than for radial networks. The Company suggests that this is due to the additional complexity in managing meshed networks. Whilst the Authority agrees that power flows on meshed networks can be more difficult to assess, the Authority does not agree that the characteristics of 33kV meshed networks may make any connection to them complex and that further modelling and study is always required for any new load.

6.6 The Authority acknowledges the Company's statement (paragraph 4.5) that the Company's 'Statement of Methodology and Charges for Connection' to its system<sup>4</sup> states that a System Study is required for "large and/or complex" demand connections. However, the terms "large" and "complex" are not defined in the Company's charging methodology.

6.7 The Authority recognises that the Company will be involved in progressing capacity connection requests which may properly be regarded as large but guidance from the Company as to what would constitute a large connection would be helpful to customers.

6.8 The Authority recognises that the Company may receive requests for connections which are complex in nature. The complexity involved can only be assessed on a case by case basis, therefore we would only expect the Company to undertake further modelling and studies for specific cases, where it is justified. Guidance from the Company as to the factors it will consider in assessing complexity would be helpful to customers.

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<sup>4</sup> 'Statement of Methodology and Charges for Connection to [REDACTED] Electricity Distribution Network', effective from 1 April 2006.

- 6.9 Whilst this issue has not impacted on the Authority's decision in this determination, the Authority considers that the Company should amend its 'Statement of Methodology and Charges for Connection' and define more clearly the parameters that determine whether a System Study is required.

#### **Reasonableness of Charging for a System Study**

- 6.10 The Authority has considered the reasonableness of charging for the System Study by comparing the initial report produced by the Company (24 January 2007), the cost of which is included in the PoC study for which the customer was charged £2,503.00 plus VAT, and the System Study report for which the disputed charge (£1,638.00 plus VAT) has been made. In addition, the Authority has taken into consideration the Company's knowledge of a planned load transfer of 2.9MVA from its [REDACTED] primary substation.
- 6.11 The Company's initial report identified that the geographically most suitable primary substation to connect the new load to was [REDACTED]. The only potential constraint to this connection arrangement was the capacity of the [REDACTED] circuit. The loss of either the [REDACTED] or [REDACTED] circuits could already cause a minor overload of the [REDACTED] circuit. However, the Company considered that the level and potential duration of this overload presented an acceptable risk and no reinforcement was planned. The report correctly stated that the connection of the new load to [REDACTED] would exacerbate this overload. However, a load flow study was not carried out (Report of 24 January) to assess this quantitatively.
- 6.12 The System Study that followed the initial study did include power flow studies. The System Study confirmed the original conclusion that the capacity of the [REDACTED] circuit was critical. The study confirmed the original conclusion that this circuit could experience a minor overload with the outage of the [REDACTED] circuit. The study quantified the increase in the overload condition with the new load connected at [REDACTED] [REDACTED] and concluded that this risk was not acceptable.
- 6.12 However, the Authority notes that the study identified that an approved 2.9MVA of load presently fed from the Company's [REDACTED] primary substation was to be transferred to another part of the Company's network. This planned load transfer was shown to be more than sufficient to remove the [REDACTED] constraint.

6.13 The Authority considers that knowledge of the planned load transfer from the [REDACTED] substation should have been available as an input to the Company's initial study. The Authority considers that the Company, when progressing the planned transfer of 2.9MVA away from [REDACTED] primary substation, would have undertaken load flow analysis to assess its impact on the [REDACTED] constraint. If the Company had taken this available information into consideration at the time of the initial study, it would have deduced that the magnitude of this load transfer would be likely to relieve the [REDACTED] constraint. Additionally, the Authority is of the view that, because of the coincidence of the [REDACTED] primary load transfer and the connection application for the new load at [REDACTED], the Company could reasonably, with little extra resource, have confirmed that this planned load transfer would have allowed the connection of the new load, thus avoiding the need for the additional System Study.

## **7 DETERMINATION**

7.1 Having regard to the points outlined above, in particular, the Company identifying the planned 2.9 MVA load transfer from [REDACTED] substation to remove the [REDACTED] constraint, the Authority determines that the additional System Study was not justified in this case. Therefore, a System Study in this case was not an expense reasonably incurred in the provision of an electric line or plant under section 19(1) of the Act and it is not reasonable in all the circumstances for the cost to be defrayed by the Customer. Therefore, the expenses for providing a System Study £1,638.00 plus VAT should be refunded to the Customer.

7.2 This document constitutes a notice stating the reasons for the Authority's decision for the purpose of Section 49A of the Act.

**Martin Crouch (20 December 2007)**



**Director Electricity Distribution**

**Duly authorized on behalf of the Gas and Electricity Markets Authority**