



The Company Secretary
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*Bringing choice and
value to customers*

Your Ref: UU/002.1
Our Ref: RBA/DPC/SOC
Direct Dial: 020 7901 7255

cc: Simon Brooke (by email only)

13 March 2006

Dear Sir/Madam,

Decision in relation to Modification Proposal UU/002.1 to the Use of System Charging Methodology: Reactive power charges

On 24 February 2006, United Utilities Electricity plc (UU) submitted a proposal, reference UU/002.1 to the Gas and Electricity Markets Authority (the 'Authority')¹ to modify UU's use of system (UoS) charging methodology statement.

The proposal modifies the UoS charging methodology statement for the method by which UU levies reactive power charges. The changes are designed to provide further cost reflectivity, transparency and consistency in UU's methodology. This modification proposal follows our decision letter, published on 22 February 2006², which vetoed modification proposal (UU/002) concerning reactive power charges.

Having carefully considered the issues raised in the proposal, the Authority has decided not to veto this modification.

This letter sets out the background to the modification proposal, explains briefly the proposed changes, and sets out the reasons for the Authority's decision.

Background

UU has licence obligations³ to have in place as of 1 April 2005 three charging statements: the UoS charging methodology statement, the statement of UoS charges and the connection charging methodology statement. The UoS charging methodology statement outlines the method by which distribution UoS charges are determined. UU has a

¹ Ofgem is the office of the Authority. The terms 'Ofgem' and the 'Authority' are used interchangeably in this letter.

² Decision letter on Electricity Distribution Use of System Charging Modification Proposals: United Utilities - Reactive power charges.

³ Standard Licence Conditions (SLC) 4-4B

requirement to keep the methodology under review and bring forward proposals to modify the methodology that it considers better achieves the relevant objectives⁴.

UU Modification Proposal UU/002.1

Ofgem vetoed the modification proposal UU/002 on the basis that it implied that double charging could occur. A summary of the issues is given below; full details on this are set out in the UU/002 decision letter, available on our website⁵.

UU's charging model is used to calculate the cost of providing network capacity to each class of demand user connected to their system. The outcome of the model is a matrix of £/kW/year 'yardstick' costs relating to various voltage and transformation levels. These yardsticks assume that customers have a power factor of 0.95. If an assumed power factor of less than 0.95 is used in the charging model then the £/kW/year yardstick costs will be increased. The reason for this increase in the yardstick costs is that if the average network power factor is reduced then more kVA units of capacity will be required to provide a given kW network capacity increase. The yardsticks are used as the basis for allocating costs to demand users. These allocated costs are recovered from users in various ways which include a kVA charge and a kWh charge.

The vetoed charging modification UU/002 could have permitted UU to calculate reactive power charges based on the total change in these yardsticks where the assumed power factor was less than 0.95. This method did not recognise that some of the additional costs suggested by a change in these yardsticks as a result of a lower power factor would already automatically be recovered via kVA charges.

UU's charging modification proposal UU/002.1 excludes the proportion of the yardstick costs that are recovered via the kVA charge from the calculation of their reactive power charges. It therefore seeks to remedy the double charging issue by explicitly excluding capacity costs that are recovered via their kVA charge from the calculation of their reactive power charges. The wording of the UoS charging methodology statement has been amended to reflect this calculation.

The additional capacity costs that are caused by a poor power factor and that are not recovered via kVA charges are allocated to customers on the basis of the kVARh that they consume. According to UU's UoS charging methodology statement the resulting kVARh charges are applied not only to demand customers (this includes generators who are importing real power) but also to generation network users who are exporting real power.

The proposal also (as with the original UU/002 proposal) seeks to change the threshold at which UU will begin to apply reactive power charges for demand users (this includes generators who are importing real power but not generators who are exporting real

⁴ The relevant objectives for the use of system charging methodology, as contained in paragraph 3 of standard licence condition 4 of UU's distribution licence are:

- (a) that compliance with the use of system charging methodology facilitates the discharge by the licensee of the obligations imposed on it under the Electricity Act 1989 and by this licence;
- (b) that compliance with the use of system charging methodology facilitates competition in generation and supply of electricity, and does not restrict, distort, or prevent competition in the transmission or distribution of electricity;
- (c) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business; and
- (d) that, so far as is consistent with sub-paragraphs (a), (b), and (c), the use of system charging methodology, as far as reasonably practicable, properly takes account of developments in the licensee's distribution business.

⁵ www.ofgem.gov.uk

power). If the proposed methodology is adopted this would mean that demand users will pay reactive power charges where their average power factor falls below 0.95. Previously this threshold was a power factor of 0.9. A power factor of 0.95 is consistent with that used by UU in its model to determine UoS yardstick costs.

In the case of generation network users who are exporting real power UU's UoS charging methodology statement already applies charges to these customers when their power factor falls below 0.95. The modification proposal does not alter this situation. Generation network users who are exporting real power and have a power factor of less than 0.95 will pay for excess reactive power units consumed at the same kVArh rate as demand users. The main effect on these network users of the adoption of the proposed reactive power charging methodology by UU will be that they pay a lower kVArh unit charge.

UU states that the proposed change to its methodology is designed to achieve cost reflective excess reactive power charges which are levied in a manner consistent with the calculation of charges in their charging model.

The modification proposal report UU/002.1 submitted by UU can be found on our website as an attachment to this document.

The Authority's decision

The changes to the UoS charging methodology statement requires consideration from the Authority in line with SLC4. The Authority has considered the proposal against the relevant objectives and wider statutory duties.

It is our view that by excluding the proportion of the yardstick charges that are recovered via a kVA capacity charge the proposed reactive power charges are now more cost reflective and the Authority has therefore decided not to veto this modification.

Please contact Mark Cox on 0207 901 7458 or Colette Schrier on 0207 901 7239 if you have any queries in relation to the issues raised in this letter.

Yours faithfully,



Martin Crouch
Director, Distribution

Signed on behalf of the Authority and authorised for that purpose by the Authority

Annex 1: Glossary of terms

DNO	Electricity Distribution Network Operator
kVA	Kilovolt Amperes
kVAr	Kilovolt Amperes Reactive
kVArh	Kilovolt Amperes Reactive hour
kWh	Kilo Watt hour
UoS	Use of System