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Dear Mark

Structure of Electricity Distribution Charges

Thank you for the opportunity to respond to the consultation paper "Proposed DNO charging methodology statements". This response is prepared by Eclipse Energy Company Limited on behalf of its affiliate Ormonde Energy Limited (OEL). OEL is progressing an innovative joint development of an offshore wind farm (100MW) and an offshore gas turbine generator (90MW). An application for connection to United Utilities distribution system at 132kV is in preparation and will be submitted prior to the end of 2004.

OEL's power stations will be affected by the proposed changes in connection and/or use of system charging for distributed generators, either in the near term (should it connect under the new scheme) or in the longer term (when the grandfathering of those connected under the current scheme expires). Other projects being considered by Eclipse Energy Company might result in connections to other DNOs.

1 General Comments

As a prospective operator of embedded independent generating stations, OEL has had some difficulty in understanding the disparate parts of the new scheme of charging, and its current understanding has come from private discussions with Ofgem and DNOs, together with a review of the documents throughout the history of the new charging structure for distribution. There is a fundamental concern that the switch to "shallowish" connection charging will, when combined with the new GDUoS, result in embedded generators paying more for their connection overall. OEL notes that the November 2003 decision document ("Structure of Electricity Distribution Charges") stated that "at present, most generators connecting to distribution networks do not trigger reinforcement", and those generators coming forward now may face a step change in costs compared with those who have already secured connection offers.

It has proved impossible for OEL to reconcile the proposed GDUoS charges (where these have been shown by DNOs as a uniform rate across all EHV generators) with any cost savings on the initial connection cost. Whilst the principle appears to be that generators will pay only part of the reinforcement cost, it is far from clear that the part being recovered by GDUoS aligns with the part that is not paid by generators collectively. No DNO shows the impact of changing the charging regime from "deep" to "shallowish", and in the case of United Utilities an erroneous methodology appears to have been used to get from an average EHV reinforcement cost of £50/kW to an average GDUoS of £6.75/kW/year (see specific comments below).

Further, whilst the new charging methodology is predicated on a major increase in distributed generation, introducing a scheme that increases the combined cost of connection and use of system may simply discourage generators from connecting in the first place. The so-called incentive payment of £1.50/kW/year and fixed O&M cost of £1/kW/year also penalise generators with relatively low cost connections – ones that were more likely to go ahead anyway.

2 Specific Comments on the Consultation Paper

Comments are provided below against the sub-headings in the "Generation" part of section 4 of the consultation paper.

Generator Use of System Models

OEL believe that EHV connections should be on a site specific basis to avoid cross-subsidy between different connections in different parts of the network. OEL notes that Ofgem has commented, in section 5.19 of the consultation paper, that it disagrees with this, despite a majority of Licensees proposing that approach for EHV. Ofgem's reasoning is that locational tariffs give better transparency of pricing, and stronger locational messaging over time. OEL disagrees with the former, since the majority of the connection cost at EHV is likely to arise from the user-specific assets and the proportion of reinforcement which the user bears directly. If these figures can be estimated by the generator in advance, it can also calculate the applicable GDUoS.

Further, for new small generators, certainty of charges over a period of time is crucial, and if the GDUoS tariff can change according the developing system costs, then there will be *less* transparency and certainty for the generator at the outset. It is also the case that a generator, once located at a particular point in the system, is unable to respond to locational signals until the end of its economic life, and changes in use of system costs during that life would simply be windfall gains or losses against a projected cost base.

NGC Exit Charges

These appear inappropriate for export charging for generators. It is a recognised principle that licence exempt embedded generators are deemed not to use the transmission system.

Business Rates

To the extent that rates are in the DNOs cost base, it is assumed that these will have to be recovered from users.

Reactive Power

If reactive power charges are to be levied, then payment should be made to generators who can reduce the DNO's costs in this area.

Volatitlity in GDUoS

In respect of EHV, this has already been commented on. More generally, OEL welcomes a mechanism which limits changes between years.

Microgeneraton

No comment.

Benefits for deferred expenditure

Generators who benefit the network should have this recognised by a lower connection charge and/or GDUoS.

Transitional Arrangements

Whilst this section refers to generators "connected" before or after 1 April 2005, OEL believes that this is the wrong criteria. Where an offer of connection is made prior to 1 April 2005, that would obviously have to be made under the current "deep" charging scheme, and such an offer will have a period of validity for acceptance, which may extend into the period after 1 April 2005. Provided such offer is accepted while it is still valid, then the current rules should apply. Only where an offer is made on or after 1 April 2005, should the new "shallowish" charging rules apply.

Network Access Rebates

These should be set at a meaningful level. At the very least they should be equal to the annual £/kW GDUoS charge expressed as £/MWh of lost load. A charge of £5/kW/year would thus equate to a rebate of £0.6/MWh for loss of connection for more that 438 hours each year if the assumed or contractual level of connection is for 95% of the year (ie £5000 / (8760 * 0.95)). While such a rebate is unlikely to compensate for the value of lost energy it would at least mean that the generator is not paying a use of system charge for times when it is denied use of the system.

Changes to agreed capacity

OEL believes that the 5 year rule should apply to generation as it does to demand capacity.

Worked Examples

These are required for generation and prior to the final determination of the charging structure, should be contrasted with the equivalent charge under the current rules. Such examples should demonstrate that for the "average" generator there would be no material change as between the current charging scheme and the new one.

3 Specific Comments on United Utilities Use of System Charging Methodology Statement

Comments below are numbered according to the paragraph numbers in United Utilities draft statement.

1.10 Where a generator is embedded and Licence exempt it will not be required to be a party to the CUSC or the BSC, and the fourth and fifth bullet should be amended so they do not apply where the generator can demonstrate that it is exempt.

5.4 - 6 A new paragraph should be added between 5.4 and 5.5 to make it clear that an offer which is made prior to 1 April 2005 but accepted after such date (but within the period of validity of that offer) will still be treated under the methodology applying prior at the time the offer is made. Paragraph 5.6 and the headings should be amended accordingly.

5.13 The reference to 15 years should be changed to 5, with the right to change the level of capacity annually thereafter.

5.14 Recognition needs to be given to the value of reactive power services provided by generators.

5.29 Worked examples are required.

4 Specific Comments on Table 3 of United Utilities Use of System Charging Statement

OEL has spent most time assessing the impact of the United Utilities charging scheme. For EHV connected generators, a proposed range of costs is shown, from £2.50/kW/year to £19.50/kW/year. From discussion with the company, it is understood that the charges would be determined as follows:

a) identify the costs of reinforcement incurred by connection of the generator;

b) determine the proportion of such costs to be born by the generator, being X% of the reinforcement assets, where X% is determined according to the apportionment rules set out in section 6 of Connection Charging Methodology Statement;

c) take 80% of a) and deduct b);

d) express the result from c) in £/kV and annuitise over 15 years at 6.5% discount rate;

e) add £2.50 to d) and the result is the annual charge in £/kW/year.

By way of a practical example, consider a 12MW generator connecting with a reinforcement cost of £2m, 50% of which is to be allocated to the generator. Taking 80% of the total cost would be £1.6m, then deducting £1m contributed by the generator leaves £600k (or £50/kW connected) to be paid for in GDUoS. Annuitising the £50k/kW and adding £2.50 would give an annual charge of £6.75/kW or £67,500 in total.

What is not clear is what happens where the generator pays more than 80% of the reinforcement cost. This is clearly possible from the cost allocation rules. In OEL's view the calculation should be worked through with a "negative" annuitised value as follows:

Assume the same 12MW generator connecting at the same cost, but with 90% of the cost allocated to it. By taking £1.8m from £1.6m you are left with (– £200k) or (– £16.7/kW). Annuitising this gives(– £1.42/kW/year); adding £2.5 equals an annual GDUoS of £1.08/kW/year or £10,800/year in total.

An even more extreme case occurs where 100% of the costs are allocated to the generator, even after adding the £2.50 incentive and O&M contribution the annual charge remains negative. Not only is this a logical extension of the formula being adopted for generators, unless the charges are allowed to go negative there will be cross subsidy between different generators in a manner clearly counter to the intention of the new charging regime. The minimum GDUoS charge should therefore be zero or negative, and not £2.50/kW/year as shown.

OEL was also unable to reconcile the maximum charge of £19.50/kW/year with the above approach. This charge comes from an assumed reinforcement cost of £200/kW, but which, according to the method set out about, would mean than *none* of the cost would be allocated to the generator. In OEL's view, this maximum charge could only come about with a higher reinforcement cost, say £275/kW, with the generator being allocated around 7% (ie 20/kW): 80% of £275 is £220, deduct £20 to get to the assumed cost of £200/kW. However, since the reinforcement cost is in excess of £200/kW the apportionment rules do not apply! It is therefore concluded that in practical terms, the maximum charge is less than the £19.50/kW/year stated.

In addition to quoting a range of prices, United Utilities quotes an average at £6.75kW/year based on an average reinforcement cost of £50/kW. This does not appear to be correct. In our first example above, the reinforcement cost was £167/kW (ie 2,000,000/12,000) and this led to the average charge of £6.75/kW/year. Clearly a 50% contribution factor may not be the average for all generator connections, but even if a much lower average contribution rate was assumed the average cost of reinforcement must be much higher than £50/kW, or the actual "average" EHV GDUoS lower than £6.75/kW/year. For instance, this "average" cost of £6.75 would arise if reinforcement for a connection scheme cost £95/kW and the generator contributed just 26% of the cost (ie £25/kW): £95 x 0.8 – £25 = £50.

OEL therefore concludes that a mistake has been made by United Utilities, either in stating that the average reinforcement cost is £50/kW, or that the average EHV GDUoS is £6.75/kW/year. And it may therefore be that the fixed tariff for HV and LV connections should be lower than that shown if they are based on the same flawed calculation.

In respect of the United Utilities documents therefore, the key issue for OEL is that the EHV charge continues to be site specific, and that where appropriate according the methodology the GDUoS is allowed to fall below £2.50/kW/year and can even go negative (where 100% or other high cost allocation proportions are used). The same approach needs to adopted by all other DNOs to prevent discrimination between different generator users.

Yours sincerely

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