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Dear Colleague,

## Interim discount for small transmission connected generators – decision letter

In accordance with standard licence condition C13 (Adjustments to use of system charges (small generators)) (SLC C13), when calculating GB transmission use of system charges which are to apply to "eligible generators"[1] (referred to as "small transmission connected generators" throughout this document) from the British Electricity Trading and Transmission (BETTA) go-live date (expected to be 1 April 2005), the National Grid Company (NGC) is to set its charges less a designated sum to be directed by the Authority. That designated sum is referred to as a "discount".

In the absence of a direction being issued by the Authority, the discount shall be set equal to zero from 1 April 2008 until 31 May 2009 (the date that SLC C13 shall cease to have effect).

In December 2004, Ofgem published a "minded to" statement (Ofgem's "minded to" statement) and impact assessment on the range of options with respect to determining the discount for small transmission connected generators[2]. This paper summarises respondents' comments on that paper and sets out Ofgem's decision on the basis for setting the discount.

## Background and legal framework

The background and legal framework underlying Ofgem's proposal to introduce a discount for small transmission connected generators is set out in detail in its previous consultations on this subject including the "minded-to" statement and Ofgem's May 2004 conclusion document[3].

[1] "Eligible generator" has the meaning given in standard licence condition C13 (Adjustment to use of system charges (small generators)) of the transmission licence.
[2] BETTA "minded to" statement on the interim discount for small transmission connected generators and impact assessment – Ofgem, 17 December 2004 #282/04
[3] "Small generator issues under BETTA: An Ofgem/DTI conclusions document" – Ofgem, May 2004 #96/04 Chapters 1 and 3

## Ofgem's proposals

There were four key components of the proposals set out in Ofgem's "minded to" statement.

*(1) A discount should be applied to small transmission connected generators*

While SLC C13 makes provision for the application of a discount, Ofgem noted that one option would be to make no adjustment to tariffs by setting the level of the discount to zero. However, Ofgem noted that the risk of not addressing the disparity in the charging arrangements would be to disadvantage small transmission connected generators relative to small distribution connected generators. It was noted that this could hinder the competitiveness of the electricity markets and harm consumers' interests. Ofgem therefore reinforced its view that a discount against transmission charges was appropriate.

*(2) The discount should be a percentage of the total residual element of NGC's transmission network use of system (TNUoS) charges*

The concept of "netting-off" allows a supplier to contract with a small distribution connected generator for output and as a result both the generator and the supplier avoid use of the transmission network and consequently avoid paying TNUoS charges. TNUoS charges are made up of both locational and residual TNUoS charging elements. By "netting-off", the total charges avoided include all generator TNUoS charges (locational and residual) and all demand TNUoS charges (locational and residual). However, as demand is treated as negative generation under NGC's recently approved GB transmission charging model[4] then the locational elements, being equal in value and opposite in sign, cancel each other out. Consequently, the total net benefit is equal to the sum of the generation and demand residual TNUoS charging elements.

Ofgem's initial view was that the discount should be based on the generation residual TNUoS charging element as representing a robust basis for determining the appropriate share of the total residual element of TNUoS charges accruing to generation. However, changes proposed to the proportions of total revenue to be recovered from generation and demand by NGC in the context of its consultation on GB transmission charging[5] demonstrated that the level of NGC's residual TNUoS charging element accruing to generation could be distorted by factors un-related to the underlying policy rationale for the proposed discount. To ensure the discount reflected the generator's appropriate share of the total benefit from "netting-off", Ofgem proposed the discount should be calculated on the basis of the total residual TNUoS charging element (the sum of the residual paid by the generator and the residual paid by demand) and be set as a fixed percentage of that total.

[4] "GB Transmission Charging: Use of System Charging Methodology Revised Proposals Conclusions Report to the Authority" – NGC, January 2005

[5] "GB Transmission Charging: Final Methodologies Conclusions Report to the Authority" – NGC, 30 September 2004, p 44. In order to avoid the scope for negative demand charges in the north of Scotland NGC proposed to increase the portion of revenue recovered from demand customers from 73% of total revenue to 90% of total revenue. As a consequence the total revenue recovered from generation (locational and residual elements) was reduced from 27% to 10%.

*(3) The level of the discount should be determined as 25% of the total residual TNUoS charging element*

The total benefit from "netting-off", characterised by the avoidance of TNUoS charges, is shared between the generator and the supplier. The key issue in determining the appropriate level of the discount is to determine the benefit obtained by the generator.

Ofgem noted that in a competitive market the sharing of the total benefit would be determined by the contract between a supplier and a generator and that in the absence of contrary evidence it might be appropriate to adopt a 50/50 split. However, Ofgem argued that such an approach would be likely to overstate differences between transmission and distribution connected small generators given that small distribution connected generators pay "deep" connection charges and further that there are other benefits to being transmission connected such as access to a larger market and lower electrical losses. Given that under the existing charging arrangements in England and Wales (which NGC used as the basis for consulting on the development of GB charging arrangements), the generator share of the total residual TNUoS charging element is approximately a quarter of the total residual TNUoS charging element and that this has remained broadly unchanged since privatisation, Ofgem concluded that 25% of the total residual TNUoS charging element represented a reasonable basis for the generator share of "netting-off" and thus on which to base the level of the discount.

*(4) The discount should continue to be calculated as 25% of the total residual TNUoS charging element for the period the discount*

Having calculated the level of the discount for BETTA go-live, there are two options for determining its value in each year of the period that the discount will apply. One is to determine the discount as a fixed £/kW sum. The other option is to set the discount as a percentage of the total residual TNUoS charging element in each year.

Ofgem identified the advantage of a fixed sum as certainty about the level of the discount over the period of its application. However, Ofgem considered that this advantage was outweighed by the importance of ensuring the discount reflected the charging disparity, namely the benefit that distribution connected generator get from "netting-off" which is not available to small transmission connected generators, in each year. If the level of the total residual (the sum of the residual paid by generators and by demand) were to change significantly while the discount remained unaltered, then the discount could be significantly over or understated. In either case competition would be skewed which in turn would harm consumers' interests. Ofgem therefore proposed the discount continue to be calculated as 25% of the total TNUoS residual charging element in each year of the period that the discount will apply.

## Consultation responses and Ofgem's views

Ofgem received seven responses to the Ofgem "minded to" statement. Appendix 1 lists the respondents. Respondents' comments and Ofgem's further views are summarised below.

**Application of a discount**

*Respondents' views*

Four respondents supported the application of a discount as representing an equitable solution to the charging discrepancy between small transmission connected generators and small distribution connected generators.

One respondent argued that the application of a discount was fundamentally flawed as small transmission connected generators would not pay charges which reflected their usage of the transmission network. The respondent argued that providing comparable benefits to small transmission connected generators as are available to small distribution connected generators was not comparing like with like.

One respondent argued that in the long term, given the expected increases in renewable generation and the disparities between distribution and transmission, charges should be levied without such distortions as the discount. The respondent suggested that Ofgem should start to give consideration to eliminating such disparities in the future.

*Ofgem's response*

Ofgem welcomes respondents' support for a discount as a practical and pragmatic way to address the charging discrepancy between small transmission connected generators and small distribution connected generators in the short-term.

Ofgem notes the views expressed by one respondent that the application of a discount would mean that small transmission connected generators would not pay charges which appropriately reflect their usage of the transmission network. Ofgem agrees that all small transmission connected generators should be liable for TNUoS charges however at the same time it considers that the unmodified extension of the prevailing charging arrangements would place small transmission connected generators at an undue disadvantage relative to other classes of generator, particularly small distribution connected generators. It is Ofgem's view that the application of a discount represents an appropriate balance between these considerations.

In relation to the long-term position Ofgem recognises that an enduring solution is required to ensure that charging arrangements across distribution and transmission networks are cost reflective and non-discriminatory. Ofgem will progress work in this area in due course and in a timescale consistent with the measure provided for under SLC C13. Further Ofgem notes that SLC C13 makes provision for the discount arrangements to be terminated early if an enduring solution can be delivered within three years.

**Basis of the discount**

*Respondents' views*

The majority of respondents who commented on the basis of the small transmission connected generator discount supported Option 1 in Ofgem's impact assessment, which is that the discount be based upon the total residual TNUoS charging element of NGC's charges.

Two respondents noted that this would ensure the level of the discount is relatively unaffected by changes in other parameters such as the split of revenue recovery between generation and demand. Another respondent noted that basing the solution on a fixed percentage of the total residual TNUoS charging element would facilitate transparency.

One respondent argued that basing the discount on a proportion of the total residual TNUoS charging element would be more cost-reflective than the options of applying a cap or exempting small transmission connected generators from all TNUoS charges. The respondent argued that the cap would be an arbitrary measure which would result in the over or underestimation of the perceived charging disparity, namely the benefit that small distribution connected generators get from "netting-off" which is not available to small transmission connected generators, while exempting small transmission connected generators from charges would create a significant cross subsidy, which would discriminate against small embedded generators.

Three respondents commented on the proposal to separate the discount from the derivation of TNUoS charges. One respondent noted that this approach would simplify the termination of the discount and minimise the adverse affect on the further development of the transmission charging methodologies. Two respondents agreed that the proposed approach would avoid distorting locational charges unduly.

One respondent argued the discount should include part of the locational element of TNUoS charges. The respondent argued that while the locational elements of demand and generation charges were equal and opposite at the nodal level they were not at the zonal level given averaging[6].

*Ofgem's response*

Ofgem welcomes respondents' support for basing the discount on a percentage of the total residual element of NGC's TNUoS charges. In comparison with the other options set out in the impact assessment, Ofgem shares respondents' views that a discount based on the total residual element of the TNUoS charges is the most transparent and cost-reflective approach which minimises the impact on other aspects of the charging model.

In relation to the view expressed by one respondent that the calculation should also include the locational element of TNUoS charges, Ofgem considers that this would represent a less effective interim solution by potentially setting the discount too high given the issue being addressed. It would also result have inappropriate side-effects. For example, such an approach would be to remove short term locational signals entirely within the class of eligible generators. Given that the variation of location tariffs even within Scotland, this is inappropriate and in Ofgem's view unnecessary to meet the objectives of the measure.

[6] Nodes are the specific points on the transmission network at which generation or demand is connected. Given the requirement for relatively stable cost messages through the charging model, nodes are assigned to larger charging zones which contain a number of nodes.

**Level of the discount**

*Respondents' views*

Two respondents supported using 25% of the total residual element of TNUoS charges as the basis for the discount. The first respondent, while noting that using 25% of the total residual element of TNUoS charges is somewhat arbitrary, argued that a simplistic benchmark was entirely appropriate. The second respondent noted that should the decision be taken that a discount be applied then a discount of 25% of the total residual element of TNUoS charges would address the perceived disparity.

Four respondents argued that the proposal to base the level of the discount on 25% of the total residual element of TNUoS charges would result in too low a discount. Three of those respondents argued that Ofgem's assumption that the embedded benefits for generators in England and Wales were shared 50/50 between the supplier and the generator was wrong. The respondents argued that the appropriate comparison should be with Central Volume Allocation (CVA) registered embedded generators in England and Wales who receive 100% of the benefits and that this was the appropriate starting point. Two of the respondents further noted that Ofgem had set a precedent in determining that for Non Fossil Fuel Obligation (NFFO) generators the sharing of benefits had been shared 80/20, with the generator getting the 80% share of the total embedded benefits. The other respondent set out the argument that the discount should be comprised of 100% of total TNUoS charges normally paid by generators that are avoided and between 50%-100% of demand charges normally paid by suppliers and large users that are avoided. They thus argued that on a zonal basis the discount could be as high as £21/kW (Zone 4 – Skye) and possibly higher if CVA registered.

Three respondents agreed it would be appropriate to make an adjustment to the discount to reflect the fact that distribution connected generators had paid a deep connection charge. However, all three respondents questioned how this is reflected. Two respondents noted that charges for distribution connected generators from April 2005 will be on a shallow basis and that generators would face a new use of system charge of around £5/kW. The respondents therefore argued that the discount should be the total residual element of TNUoS charges minus this charge giving a discount of around £8/kW rather than the £4/kW proposed by Ofgem. The other respondent argued that analysis presented by Ofgem in the context of its review of distribution charges demonstrated that £4/kW represented a rough proxy for the difference in deep and shallow connection costs.

The fourth respondent expressed the view that using 25% of the total residual element of TNUoS charges was based on a "level of judgement" and that there exists the potential for error in that judgement. The respondent expressed the view that 25% was lower than would be expected but did not express a view as to what the actual level of the discount should be.

One respondent questioned Ofgem's statement that transmission connected generators had other offsetting benefits including lower electrical losses and access to more suppliers. On the issue of losses the respondent argued that distribution connected generators could be credited with the value of avoided demand transmission losses and that the application of a distribution loss adjustment may result in the generator's output being grossed up to reflect avoided local distribution losses. In relation to the ability to access wider trading benefits the respondent

argued that it was difficult to assess these benefits but that they would be unlikely to exceed total embedded benefits including avoided losses.

*Ofgem's response*

Ofgem notes that a range of views were expressed on the appropriate level of the discount and while some respondents consider a discount based on 25% of the total residual element of TNUoS charges would be sufficient to address the perceived disparity, there are a number of other respondents who make a case for a larger discount. Ofgem notes that this issue, inevitably, involves a degree of judgement as to how different factors which are all difficult to quantify might reasonably be balanced.

Ofgem notes the argument put forward by a number of respondents that the level of the discount should be higher. In particular Ofgem note the higher generator shares applied in the case of NFFO generators in England and Wales and for CVA registered generators. However it is Ofgem's view that the examples of sharing arrangements highlighted by respondents are not directly relevant to the case being considered and therefore not appropriate for determining the level of the discount as the setting of a discount for small transmission connected generators is not in itself related to the total level of embedded benefits but rather to addressing a specific charging discrepancy between transmission and distribution charging. Ofgem notes that the likely outcome of using embedded benefits as the benchmark is to overstate the level of the discrepancy and thus the discount. In particular, Ofgem notes that the approach suggested by one respondent whereby the discount should be comprised of 100% of generation TNUoS charges avoided and between 50%-100% of demand charges avoided would effectively result in some transmission generators not paying for using the transmission network. Further, Ofgem notes that negotiations between generators and suppliers have produced a range of different sharing arrangements and thus continues to believe that in the absence of firm evidence why a particular split should be adopted in this case, then the assumption of a 50/50 split remains an appropriate starting point. In forming this view Ofgem has also recognised that the interim discount whilst addressing one potential market distortion creates another (albeit small) distortion as between large and small transmission connected generators. Ofgem remains of the view that the proposal, in the round, strikes an appropriate balance given all the relevant considerations.

Ofgem welcomes respondents' support for the principle that the payment of deep connection charges should be recognised in setting the level of the discount. However, Ofgem does not agree that the level of the discount should be increased to reflect the introduction of shallow charging arrangements from BETTA go-live. Ofgem notes that under the distribution charging proposals only new parties connecting to the distribution network from 1 April 2005 will pay the Generator Distribution use of System (GDUoS) charge and thus be subject to shallow charging arrangements. Existing distribution connected parties have paid deep connection charges and will not be required to pay the GDUoS charge prior to 2010. In the meantime existing connectees, who will make up the vast majority of the charging base for the period in which the discount will apply, will already have paid deep connection charges. Consequently, to attribute too high a percentage of the share of total TNUoS residual benefits to generators in setting the discount would overstate the cost differences between small transmission and small distribution connected generators. This would reduce the competitiveness of small distribution connected generators relative to small transmission connected generators.

Ofgem rejects the view put forward by one respondent that the treatment of losses and the ability of small transmission connected generators to access more suppliers should not be considered as advantages to small transmission connected generators. Even taking into consideration the avoided transmission losses, losses remain significantly higher on the distribution network and therefore there remains a material net difference in losses paid by small generators on the two networks. In relation to accessing more suppliers, while Ofgem accepts that the benefit is difficult to quantify, it remains the case that accessing greater competition enables a generator to get the best possible price for its output. Further, Ofgem does not consider the respondent's point that the benefits are unlikely to be greater than embedded benefits to be relevant. The aim of the discount is not to ensure that a small transmission connected generator in Scotland has access to the full range of embedded benefits. This would be inappropriate as it would not reflect the small transmission connected generator's use of the network and would ultimately pervert the aim of the discount by disadvantaging small distribution connected generators relative to small transmission connected generators.

**Discount for the period it applies**

*Respondents' views*

Both respondents who commented on the application of a discount for the period that the discount applies agreed that it should continue to based on 25% of the total residual element of TNUoS charges. One respondent noted that this approach would be more appropriate than a fixed £/kW sum from the perspective of cost reflectivity. The other respondent noted that given that it will only apply for three years there seems little to be gained from changing this approach in future years.

*Ofgem's response*

Ofgem notes that the respondents who commented on the calculation of the discount in future years supported the proposal to continue to base the discount on 25% of the total residual element of TNUoS charges. Ofgem agrees with the view expressed by one respondent that this would be the most cost reflective approach as it will ensure that the discount continues to reflect generators' appropriate share of the total benefit from "netting-off".

**Interaction with Embedded Exemptible Large Power Stations proposals**

*Respondents' views*

Two respondents suggested that under Ofgem's proposals an anomaly would persist between distribution and transmission connected parties as a result of the current proposals for Embedded Exemptible Large Power Stations (EELPS). They noted that under a Bilateral Embedded Generation Agreement (BEGA) distribution connected parties would be liable for transmission charges. However, while a similar sized transmission connected generator would have access to the proposed discount, EELPS would not be eligible for any discount. The respondent therefore proposed that the discount should be made available to all generators connected at 132kV and below which are subject to positive TNUoS charges.

*Ofgem's response*

In respect of the charging arrangements for EELPS, Ofgem recognises the view expressed by respondents that in the event that distribution connected generators with a BEGA pay TNUoS charges there is the potential for an anomaly in the charging arrangements given the proposed discount to small transmission connected generators.

Under the EELPS proposals a generator who has signed a BEGA will have access rights to the GB transmission system and consequently the contractual provisions of the Connection and Use of System Code (CUSC) relating to the payment of connection and use of system charges will be switched on. However, under NGC's proposed GB charging methodology from BETTA go-live liability for generation charges for distribution connected generators will be limited to parties capable of exporting 100MW or more to the transmission system. In light of this, small distribution connected generators with a BEGA will not pay transmission charges from BETTA go-live and therefore the existence of the discount will not produce an anomaly in the charging arrangements.

In the event that a future review of embedded generation charging results in a change in the existing charging liability under NGC's use of system charging methodology, Ofgem will review the consistency of these arrangements with SLC C13 with a view to ensuring any charging discrepancy is addressed.

**Authority's decision**

In light of respondents' comments and in accordance with SLC C13 of NGC's electricity transmission licence, the Authority intends to direct that the "designated sum" for the purposes of that condition shall be 25% of the total residual element of TNUoS charges for the period that the discount applies.

**Way forward**

Ofgem expects NGC, in adjusting use of system charges to give effect to the discount for small transmission connected generators, to follow the process set out in SLC C13. This determines that there will be a two step process to calculating final charges for transmission users. First, the GB system operator will calculate use of system charges pursuant to its approved charging methodology independent of the proposed interim measure. Second, the GB system operator will modify the charges to reflect the discount.

The final sum of the discount will depend on the final tariffs determined by NGC. The Authority announced its decision to approve NGC's use of system charging proposals on 25 February 2005. In light of this decision NGC is expected to publish its final tariffs shortly. For illustrative purposes, and based on the indicative tariffs published in NGC's final January 2005 proposals[7], this would give a discount of £3.67/kW in the charging year commencing from BETTA go-live, expected to be 1 April 2005.

[7] GB Transmission Charging Use of System Methodology Revised Proposals: Conclusions Report to the Authority – NGC, 28 January 2005

In line with SLC C13 the shortfall in TNUoS revenue as a result of applying the discount will be recovered from all GB demand tariffs on a non-locational basis. In its January proposals NGC estimated that demand tariffs in every charging zone would increase by approximately £0.04/kW to make up the revenue shortfall.

## Appendix 1: List of respondents

1. British Energy
2. EDF Energy
3. E.ON
4. Fred Olsen Renewables
5. Renewable Power Association
6. Scottish Renewables Forum
7. Scottish and Southern Energy