nationalgrid

CONSULTATION DOCUMENT

GB ECM-22

Treatment of Exemptable Generation Connected to Embedded Transmission

January 2010

Comments and views are invited on all of the issues raised in this consultation document. To ensure that your comments and views are considered, responses should be emailed to **sarah.a.hall@uk.ngrid.com** by close of business on **9th February 2010**.

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1.0 Executive summary

When the new arrangements for offshore come into force (Go Live) in June 2010, 132kV assets offshore will become defined as transmission assets. In some cases this creates an island of transmission which is connected to a distribution network but not directly connected to the wider transmission system, these assets are known as embedded transmission. As a result of this reclassification some generators which were embedded become connected to embedded transmission assets and therefore are directly connected to the transmission network.

Due to this change in the definition of assets the charges for Exemptable generators connected to embedded transmission will not be consistent with Exemptable generators who are embedded. This consultation seeks views on a proposal to modify the charging methodology so that charges for Exemptable generation connected to embedded transmission are treated consistently with Exemptable embedded generators.

National Grid has been asked by E.ON UK to carry out a consultation on this proposal. National Grid's initial view is that the difference in charging between Exempt Embedded Generators and Exempt Embedded Transmission Generators is justified as the former are connected a distribution network and the latter are connected to the transmission network. National Grid agrees that the difference in treatment between all embedded and directly connected generators needs to be reassessed. This should be done in a consistent manner for all generators. A pre-consultation on the treatment of Embedded generation will be published shortly.

This consultation document can be found on the National Grid website at the following link:

http://www.nationalgrid.com/uk/Electricity/Charges/modifications/uscmc/

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2.0 Introduction

National Grid is obliged under its Transmission Licence:

(i) to make revisions to the Charging Statements in order that the information set out in the statements shall continue to be accurate in all material respects;

(ii) to keep the Use of System charging methodology at all times under review;

(iii) to make such modifications of the Use of System charging methodology as may be requisite for the purpose of better achieving the relevant objectives, which are:

(a) to facilitate effective competition in the generation and supply of electricity and (so far as is consistent therewith) to facilitate competition in the sale, distribution and purchase of electricity;

(b) to result in charges which reflect, as far as reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses; and

(c) that, so far as is consistent with sub-paragraphs (a) and (b), the Use of System charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses.

The purpose of this consultation is to seek views on whether the charging methodology should be changed so that charges for Exemptable generation connected to embedded transmission are treated consistently with embedded Exemptable generators. National Grid has been asked to consult on this issue by E.ON UK.

3.0 Background

Offshore transmission arrangements were introduced into the Charging Methodology in June 2009, these new arrangements are expected to Go Live in June 2010. Under the new arrangements all 132kV assets connecting offshore generation become defined as transmission assets. The ownership of these assets will move to an Offshore Transmission Owner (OFTO) and they will be operated by the System Operator (SO). As the link between the offshore substation and the onshore substation is a transmission asset, all offshore generators connected to these assets will be directly connected to the transmission system. Where offshore transmission connects to a distribution network onshore the transmission is considered to be embedded.

Before the new offshore regime goes live, where a 132kV offshore cable connects a generator to a distribution network, the generator is considered to be embedded. This is because the 132kV cable forms part of the offshore power station which connects with the wider system at the shore. If the generator is less than 100 MW they are Exemptable and are not required to have an agreement with National Grid. When the assets which were previously part of the power station become classified as part of the transmission system and are transferred to the OFTO the same generator would be considered to be directly connected to the transmission system, and would need to enter into a Bilateral Connection Agreement (BCA) with National Grid.

Under the new regime generators connected to embedded transmission will be liable for transmission charges as a directly connected generator in accordance with the Charging Methodology. Under the current arrangements Exemptable generation connected by 132kV cable offshore to a distribution network are treated the same as an onshore Exemptable generator who is connected to 132kV distribution network onshore and therefore does not pay transmission charges. Some Users believe this new regime creates undue discrimination in how these generators are treated.

3.1 BSC Modification Proposal P242[1]

E.ON UK has proposed a BSC modification in order to realign the treatment of offshore Exemptable embedded transmission generators with the treatment of onshore embedded Exemptable generators under the BSC rather than onshore directly connected Exemptable generators. This would make the treatment of losses and BSUoS payments consistent between embedded Exemptable generators and Exemptable generators connected to embedded transmission. The assessment of this proposal has been carried out and the BSC Panel has recommended that the BSC proposal should be approved by the Authority.

3.2 GBECM-08[2]

The issue of embedded transmission was consulted upon under the Further Consultation Document for GBECM-08 (Charging Arrangements Associated with Offshore Transmission Networks). The consultation noted that currently offshore generators that are less than 100MW and connected at 132kV to a distribution network currently receive “embedded benefits”. This means that rather than paying BSUoS and generation TNUoS they will be paid BSUoS and demand TNUoS (either directly if registered in Central Volume Allocation or through their supplier if they are registered under Supplier Volume Allocation). Under the implemented GBECM-08

[1] http://www.elexon.co.uk/changeimplementation/ModificationProcess/modificationdocumentation/modProposalView.aspx?propID=267
[2] http://www.nationalgrid.com/NR/rdonlyres/EDF97DC1-2A07-407B-80B1-DA1E9C171546/29207/GBECM08OffshoreChargingFurtherConsultation.pdf

methodology they become liable to pay BSUoS and Generation TNUoS (minus the small Generator discount under Transmission Licence SC 13) post Go Live.

Some industry members considered the proposals to be inappropriate and one industry party put forward an alternative strawman. This strawman was consulted upon under the GBECM-08 Further consultation. Of the four respondents to the further consultation that commented on the strawman for Exemptable generators connected to embedded transmission, two supported the strawman. Another respondent stated that it would support a review of the charging arrangements for embedded transmission in relation to embedded benefits. The fourth party believed that the issue of Exemptable power stations offshore represented a wider regulatory issue and that it might not be appropriate to make alternative arrangements in the Use of System Charging Methodology.

In the conclusions report for GBECM-08 National Grid stated: The levying of transmission charges on Exemptable power stations offshore is inherent in classifying offshore 132kV connections as “transmission” and is consistent with onshore arrangements. This situation already occurs in Scotland, where such power stations are connected to the transmission network at 132kV. These generators are eligible for discounted Generation TNUoS charges (one quarter of the total TNUoS residual charge) via the Licence Condition C13 “small generators discount scheme”, which sits outside of the governance of the Use of System Charging methodology.

3.3 132kV Transmission in Scotland

In England and Wales assets at 132kV or below are normally classed as distribution however, in Scotland assets with voltages below 132kV are normally classed as distribution. During the design of the BETTA arrangements Exemptable generation in Scotland who would be classed as directly connected, through the definition of transmission, argued that this would place them at a disadvantage to similar generation connected to the embedded system in England and Wales, who by virtue of definition would receive embedded benefits[3].

The proponents of GBECM-22 do not believe that embedded transmission is an analogous situation to 132kV onshore connection in Scotland. This is mainly due to the treatment of the Distribution costs (132kV connected generation in Scotland are not subject to a distribution cost) and the possible restriction on rights associated with connection to the distribution system (depending on the exact configuration of the distribution system).

However there are also parallels as the both of these circumstances, indeed the initial extension of Exemptable to 100MW, have been decided or determined by Ofgem / DECC following consultation.

3.4 Licence Condition C13

Licence Condition C13 has been extended to April 2011. National Grid must give best endeavours to establish an enduring solution for dealing with charging issues associated with embedded generation by April 2011. A pre-consultation on an enduring solution for embedded generation (GBECM-23) will be published in line with the timescale for this document.

National Grid is concerned that potential discrimination of Exempt generators connected to embedded transmission is caused through wider issues with the charging regime for embedded generators rather than the new definition of offshore

[3] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=9127-28204.pdf&refer=Networks/Trans/Betta/Publications

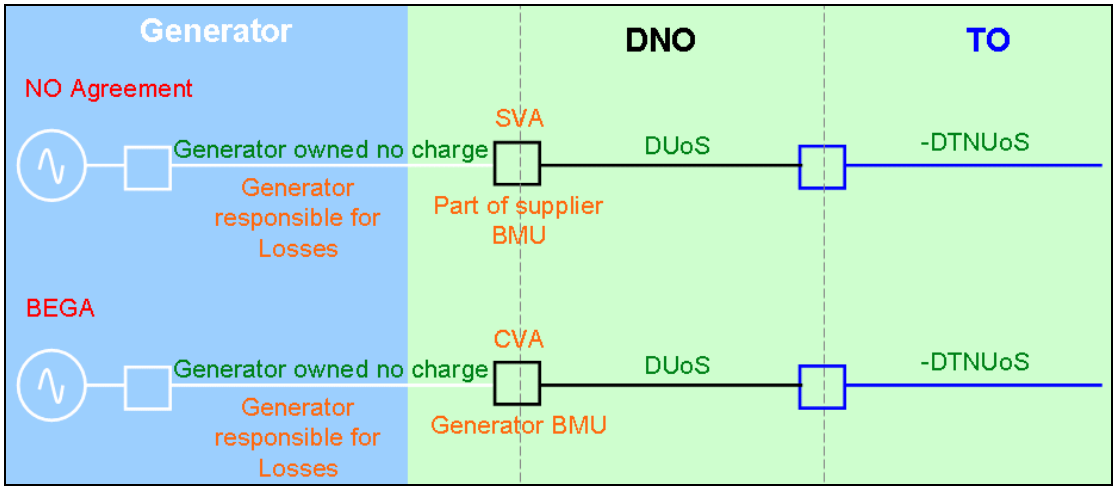
transmission. The review of charging for embedded generation will aim to provide a solution to any discrimination in a consistent manner with other generators.

4.0 Analysis

4.1 Current Regime

If a generator has a TEC below 100MW it is Exemptable and is not required to enter into an agreement with National Grid. The arrangements that established Exemptable were put in place by DECC (formally DTI). These arrangements allow generation up to 100MW to be Licence Exempt. Through further changes to the industry codes this permitted parties who are Exemptable and embedded (connected to a distribution system) to capture embedded benefits. In England and Wales assets at 132kV or below are normally classed as distribution and in Scotland assets with voltages below 132kV are normally classed as distribution

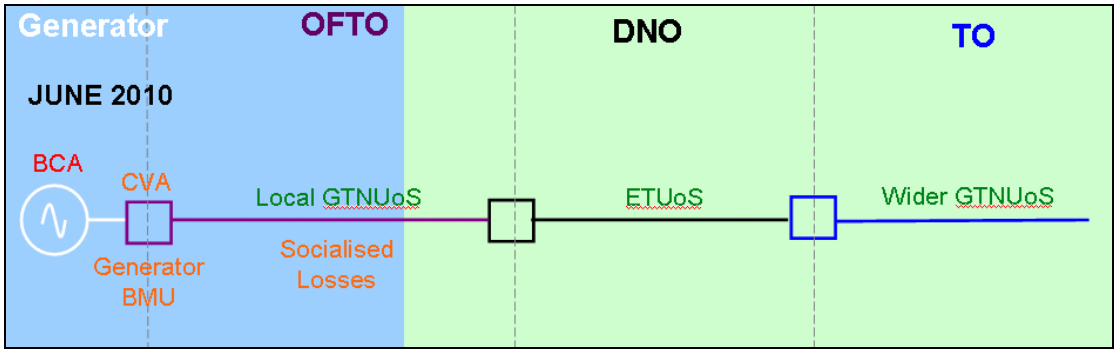
The current arrangements mean that if you are an offshore generator below 100MW and currently connected to a distribution network in England and Wales through your own offshore 132kV assets you can choose to apply for exemption from the requirement for a generation licence. Another option for the generator is to choose to have a Bilateral Embedded Generation Agreement. These two potential arrangements are described in the following diagram.



In both arrangements the offshore cable is a generation asset and the generator is fully responsible for the costs. The generator can choose to be SVA registered and included as part of a supplier Balancing Mechanism Unit (BMU) or if the generator wished to take part in the balancing mechanism they could choose to be CVA registered and have their own BMU. Under both arrangements the generator is liable for Distribution Use of System (DUoS) charges. The generator would either be directly paid demand TNUoS if they were CVA registered or could enter an agreement with their supply to receive demand TNUoS if they were SVA registered i.e. in both cases they receive embedded benefits.

4.2 Future Regime

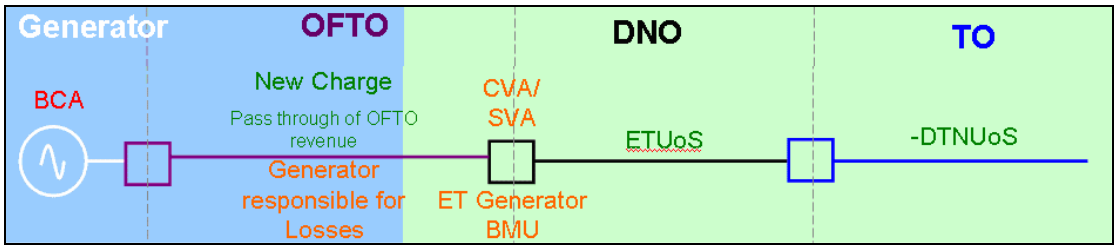
Under the new arrangements for offshore a generator connected to 132kV assets will be considered to be directly connected to the transmission system. This is because 132kV assets are defined as transmission offshore. The same embedded transmission generator considered in the previous diagram would have the following arrangements.



The ownership of the offshore cable changes to the OFTO this cable is added to the transmission infrastructure and charged through the Transmission Network Use of System (TNUoS) methodology. The cost of the cable and some of the substation assets will be recovered from the generator through their local TNUoS charge. Any distribution charges which are levied on the GBSO will be passed directly through to the generator through the Embedded Transmission Use of System (ETUoS) charge. The generator will also be liable for the relevant wider TNUoS charge.

4.3 GBECM - 22 Arrangements

This modification proposes to change the Charging Methodology so that the charges for generators connected to sole use embedded transmission are consistent with the onshore embedded generators. This would mean that the level of BSUoS and TNUoS charges paid to the generator would remain the same as under the current regime. These charges are described in the following diagram.



A new charge would be introduced that passes through the full cost of the offshore transmission. This charge would be required to recover the OFTO's revenue. The generator would also be liable to pay ETUoS which would pass through the DUoS charge. The generator could choose to be CVA registered and receive negative demand charges or they could choose to be part of a supplier BMU and would need to make arrangements with their supplier to receive payment for negative demand.

4.4 Summary

The following table summarises the charges for an Exemptable Embedded Transmission Generator under each of the arrangements.

	Current Charges	Charges After Go Live	GBECM-22
Offshore	Generator owned	Local Generation TNUoS	New Charge
Distribution	DUoS	ETUoS*	ETUoS*
Transmission	-Demand TNUoS and -BSUoS	Wider Generation TNUoS and BSUoS	-Demand TNUoS and -BSUoS

* ETUoS is expected to be equal to DUoS

The charges for distribution would be the same under all three arrangements. The charges for the offshore assets would be different as the charges after Go Live will depend on the results of the OFTO tender. The new charge would pay for the OFTO revenue without any socialisation so would be greater than the local generation charge which would be payable at Go Live. A key difference in charge is that generators will pay transmission charges rather than be paid transmission charges.

4.5 Rationale

The purpose of this modification is to ensure that Offshore Exemptable Generators connecting to embedded transmission after Go Live will be able to gain access to Embedded Benefits whilst picking up the relevant offshore costs.

The rationale for this modification is that the change in status as a result of the Offshore Transmission Arrangements gives rise to potential undue discrimination against the Offshore Exemptable Generator compared to Onshore Exemptable Generation. The discrimination could be considered undue as the only difference before Go Live between Offshore Exemptable Generators and Onshore Exemptable Generators is that pre Go Live the offshore generator is liable for its own offshore assets. At Go Live if the generators offshore assets are 132kV or above they will become transmission and the generator will not only be liable for the offshore assets but for wider transmission charges too.

The rational for this proposal also has a linkage to the P242 proposal in the BSC. Under the Go Live arrangements the Offshore Exemptable generator connected to embedded transmission would be capable of trading energy at the National Balancing Point, whereas under the P242 proposals the generator is limited to trading energy within the Grid Supply Group that it is metered.

The following table shows the charges for four types of generator after Go Live an embedded generator, a directly connected offshore generator and a generator connected to embedded transmission.

Charge	Exemptable Generator 1	Exemptable Generator 2	Exemptable Generator 3	Exemptable Generator 4	Exemptable Generator 5
	Onshore		Offshore		
	Embedded	Directly Connected	Embedded	Embedded Transmission	Directly Connected
Local Generation TNUoS	No Local TNUoS	Local charge includes some socialisation of transmission asset costs until the first MITS substation	No Local TNUoS	Local charge covers OFTO assets with some socialisation	Local charge includes some socialisation of transmission asset costs until the first MITS substation
Wider Generation TNUoS	No Wider TNUoS	Pays zonal wider TNUoS (Receives C13 discount if connected at 132kV)	No Wider TNUoS	Pays Zonal wider TNUoS (Receives C13 discount if connected at 132kV)	Pays zonal wider TNUoS (Receives C13 discount if connected at 132kV)
DUoS	Pays DUoS	No DUoS	Pays DUoS	Pays DUoS through ETUoS	No DUoS
Demand TNUoS (if exporting at triad)	Receives demand TNUoS	No demand TNUoS	Receives demand TNUoS	No demand TNUoS	No demand TNUoS

The charging arrangements for generators connected to embedded transmission were designed to be consistent with other transmission connected generators. National Grid believes that the charges for generator 4 and 5 in the table above are the same except that the charges for assets between the first onshore substation and the first MITS substation are charged for through different mechanisms. This difference is necessary because the assets are distribution in the case of the embedded transmission generator and they are transmission in the case of the directly connect generator. Other transmission connected generators do not pay for their effect on the distribution network.

Proponents of the model implied by GBECM-22 and P242, believe that embedded transmission connected generators do not benefit from connection to the wider transmission network in the same manner as directly connected generators and therefore should not be charged in the same manner as them. They also note that under current arrangements, embedded transmission generators will be exposed to both distribution and transmission charges at Go Live; whereas directly connected generators are exposed only to transmission charges and embedded generators are only exposed to distribution charges. These parties believe that embedded transmission connected generation does not have a larger impact on the total system compared with other classes of generator. Therefore they believe that this exposure to a wider range of costs than other classes of generator is unjustified and results in undue discrimination.

They also believe that embedded transmission connected generation is more closely analogous to that of onshore embedded generation rather than directly connected

generation and therefore should be treated in the same manner, except to reflect the key difference - the presence of the offshore assets. It is therefore proposed that the full costs of the offshore assets should be passed through to the Exemptable embedded transmission generator in the form of a connection charge. In this way the generator would be treated in the same manner as pre Go Live when these assets are part of the relevant power station.

This consultation considers the proposal to change the Charging Methodology so that offshore embedded transmission generators pay charges that are consistent with onshore embedded generators.

This consultation seeks views on whether offshore Exemptable Embedded Transmission generators would be unduly discriminated against when the new arrangements Go Live?

Views are particularly welcomed on whether charges for embedded transmission generators should be consistent with directly connected generators or embedded generators?

4.6 Impact on Exemptable Embedded Transmission Generators

There are currently three generators (a total of 270MW) which are below 100MW and connected to sole use offshore transmission and further units may choose to connect in this manner in the future. The impact of this modification on the revenues of these current and future generators is discussed below.

- **Offshore:** Some of the offshore substation assets and overheads would be socialised at Go Live. The benefit of this to the embedded transmission generator would be lost under this modification as the assets would be charged as connection assets.

- **Distribution:** The level of charge for the use of the distribution network would be the same under both scenarios.

- **Transmission:** The difference in charge for the onshore transmission network would be related to the sum of the generation and demand tariffs at the point where the generator is connected.

4.6.1 Offshore

Some of the OFTO costs would be socialised. These are costs that are socialised under the onshore charging methodology and so to ensure consistency are also socialised Offshore. The sharing factors as to how much would be socialised are currently uncertain initial estimates suggest that around 67% would be recovered directly from the offshore User.

As the tender for ownership of the embedded transmission is still in progress it is uncertain as to what the total TO costs would be. However, indicative information from Ofgem[4] for the three stations considered above estimates their total transfer

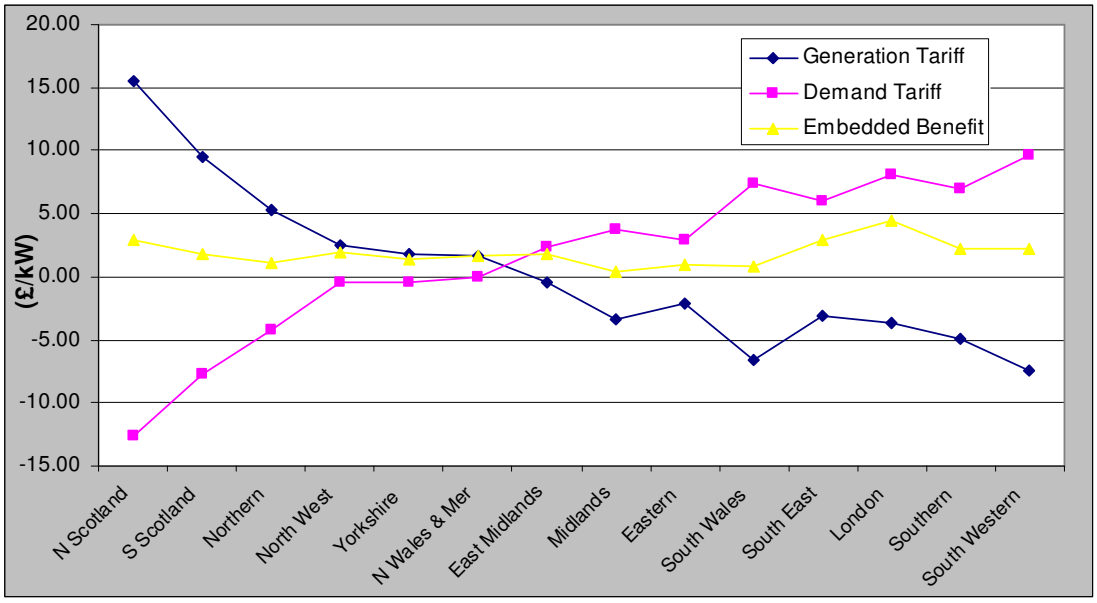
[4] Offshore Transmission Bidder Day 23 July 2009 (slide 12): http://www.ofgem.gov.uk/Networks/offtrans/edc/Documents1/Offshore%20Transmission%20Owner%20(OFTO)%20Bidder%20day%20Presentation%2023%20July%202009.pdf

cost at some £95.2m. As part of the assessment of the impacts of GBECM-21, considering changing tariffs mid-year to accommodate Go Live of the OFTO regime, National Grid has carried out analysis in order to estimate annual OFTO costs. Based on its central case the annual OFTO costs associated with the above stations would be £18million.

The OFTO annual cost which would have been socialised at go live this will be paid by the Exemptable embedded transmission generators under GBECM. If 33% of the cost was socialised, in total for the three current stations the additional cost would be £5.9 million.

4.6.2 Transmission

Subject to zoning, the locational elements of TNUoS demand and generation tariffs are the equal and opposite of each other in the same location. Where a transmission connected generator pays the locational TNUoS generation tariff determined by its location, a generator connected to the distribution system is effectively paid the demand tariff dependent on location by its relevant supplier which nets the distributed generation from its demand. Assuming 100% pass-through of the avoided demand tariff by the supplier, Figure 1 identifies that locational TNUoS tariffs result in an average embedded benefit of ~£2/kW. It should be noted that for illustrative purposes, TNUoS generation zones have been modelled as TNUoS demand charging zones to enable a direct comparison to be drawn, whilst the ~£2/kW average benefit is the product of the use of differing 'relevant' nodes when calculating the flow-weighted marginal km for each zone.

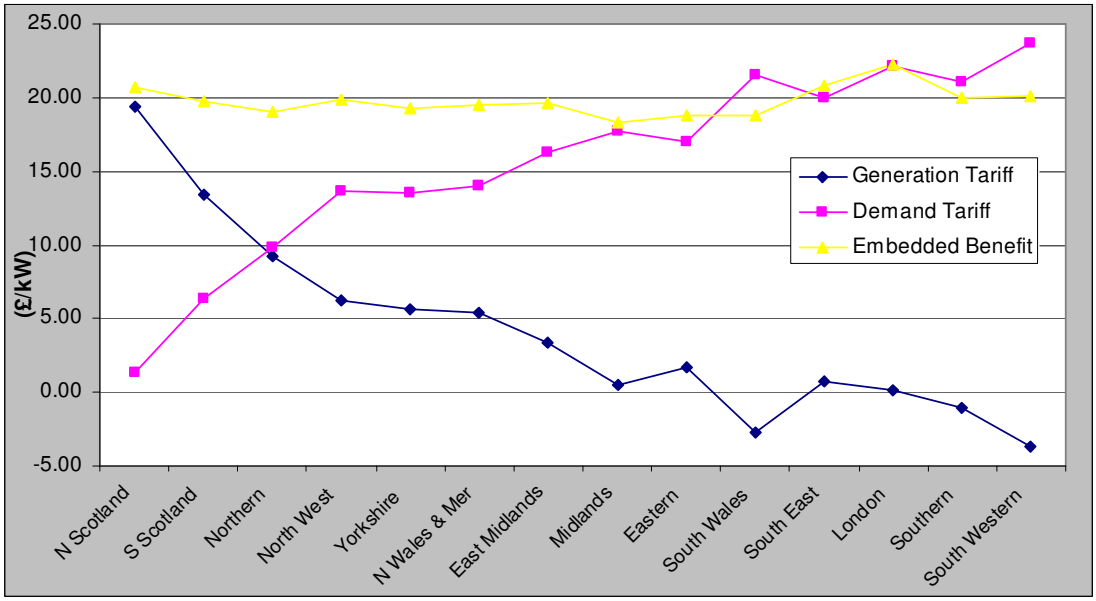


* Based on 2007/8 charging data

Whilst the gross revenue flows for payment of locational generation and demand tariffs in 2007/8 amount to approximately £550m, net payments from demand and generation Users amount to approximately £180m (only ~15 percent of allowed revenue). For the 2007/8 charging year, approximately £1.05bn of revenue is therefore recovered from generation and demand users on a 27/73 percent revenue split basis, from the residual generation and demand tariffs which amount to ~£3.87/kW and ~£14.06/kW respectively.

When adding the relevant residual elements to the locational tariffs, this has the impact of increasing both TNUoS generation and demand tariffs such that the

average embedded benefit becomes ~£20/kW. This represents an increase of the sum of both residual tariffs of ~£18/kW presented in Figure 2. Whilst in practice this value varies dependent on the exact location of a generator within its TNUoS generation zone, the sum of the residual tariffs should be considered as a good proxy for determining the benefit to a generator of connecting to the distribution system in any location, given the transmission tariff which a generator connected to the transmission system would be subjected to in that same location.



The impact on a 90 MW generator of introducing this modification would be in the order of £1.8 million[5] per annum.

Under the cost benefit analysis for P242 the BSUoS savings for the three generators are estimated at £959,037 and the same saving would be made by suppliers. If the suppliers passed this benefit on to the generators the total benefit would be approximately £1.9million.

4.6.3 Summary

For the three generators the total estimated effect on annual Use of System charges is.

	Estimated Effect of GBECM-22
Offshore	+£5.9million
Distribution	No change
Transmission	-£5.4million (TNUoS) and -£1.9million BSUoS*
Total	-£1.4million

*Assumes suppliers pass on benefit

4.7 Impact on Other Users

The impact on other Users would be two fold firstly as the Exemptable embedded transmission generators would be paid demand TNUoS rather than paying wider

[5] 90,000kW x £20kW

generation TNUoS the change in their contribution to the maximum allowed revenue will change by approximately £5.4million[6]. This would need to be recovered from other Users. Given the total TNUoS pot is around £1,600million per annum the overall impact would be an average increase in the order of 0.3%. However, the size of this increase would be different for demand and generation users as they are exposed to different residual costs as mentioned above. The estimated £5.4million above would be recovered in the proportion 27:73 from generation and demand respectively, or £1.5million:£3.9million.

Secondly, if the cost of the offshore network is recovered through connection charges the charge would not be included when the 27:73 Generation:Demand split is calculated. Therefore, charges recovered from suppliers would reduce by 73% of this cost, whilst the charges to generators would increase by a similar amount. As the tender for ownership of the embedded transmission is still in progress it is uncertain as to what these costs would be. However, indicative information from Ofgem[7] for the three stations considered above estimates that their total transfer cost at some £95.2m. As part of the assessment of the impacts of GBECM-21, considering changing tariffs mid-year to accommodate Go Live of the OFTO regime, National Grid has carried out analysis in order to estimate annual OFTO costs. Based on its central case the annual OFTO costs associated with the above stations would be £18million. This means that the effect on supplier users of allocating these costs as connection charges would be a reduction in tariffs of 73% of £18million or £13.1million. Charges to generators would increase by the same amount.

The table below summarises the estimated effects on suppliers and generators charges.

Effect	Exemptable Embedded Transmission Generators	Suppliers	Other Generators
Transmission (TNUoS)	-£5.4million	+£3.9million	+£1.5million
Transmission (BSUoS)	-£1.9 million	+£0.9million	+£0.9million
Removal of Offshore Costs from 27:73 split	+£5.9million	-£13.1million	+£7.2million
Total Effect	-£1.4million	-£8.3million	+£9.6million

Under both models the generation would be included in the transport model as TEC at the electrically closest GSP. The flows on the system would not be altered. It will be important for National Grid and the DNOs to ensure that the stations are treated consistently to avoid double counting.

The netting of BSUoS charges relates to the changes that are proposed under the BSC modification P242. We note in the BSC proposal that the Cost benefit Analysis has indicated the change applicable for the Exemptable embedded generator and directly on associated suppliers. The table assumes the supplier passes on the BSUoS benefit to the generator. We note that the overall cost of BSUoS is approximately £1,000m per annum and the cost attributed to these generators is

[6] 3Generators x 90,000kW x £20kW
[7] Offshore Transmission Bidder Day 23 July 2009 (slide 12): http://www.ofgem.gov.uk/Networks/offtrans/edc/Documents1/Offshore%20Transmission%20Owner%20(OFTO)%20Bidder%20day%20Presentation%2023%20July%202009.pdf

estimated to be in the order of £2m. Therefore the overall impact on BSUoS for other parties is very small, in the order of a 0.2% increase.

If this modification were to be implemented before April 2010 the tariffs would already have been set. This means that the tariffs will not include this modification. This could lead to an over recover of MAR as the part of the offshore network which is being currently assumed to be socialised would be recovered both through the tariffs and the new charge. The method for dealing with this over recovery would depend on the outcome of GBECM-21.

4.8 Signal Given to New Users

When an OFTO is designing the connection of an offshore generator they may have the option to connect to either a distribution substation or a transmission substation. If the generator receives embedded benefits for connecting through embedded transmission they may have a preference for this connection configuration. If the embedded benefit is too great the signal will encourage the generator to have a preference to be embedded even when this is not the most efficient solution overall. Given the new OFTO tender process it remains to be seen how this signal would be taken into account.

National Grid has undertaken some analysis to determine the actual benefits of avoided transmission investment associated with a generator deciding to connect to the distribution networks in preference of the transmission network in the same location. This has been subject to discussion at the Transmission Charging Methodologies Forum (TCMF) and its subgroup, the Charging Issues Standing Group (CISG) in recent months.

In summary, the avoided transmission costs comprise of two categories; the avoided transmission costs which would have otherwise occurred as a result of increasing demand at a relevant GSP; and the avoided costs of connecting new generation to the transmission system.

Using actual demand growth figures between 2000 and 2006, and actual levels of transmission investment resulting from this, in addition to forecast 2006-2012 demand figures and planned levels of investment, the transmission savings associated with demand are estimated to be in the region of £5.00/kW and £5.75/kW in today's prices.

In assessing the avoided levels of transmission investment resulting from generation connecting to the transmission system, National Grid's revenue drivers which form part of the 2007-12 Price Control Review settlement[8] were used. The average additional costs incurred (or avoided) in connecting more (or less) new generation than assumed in the baseline for England & Wales, equates to an annuitised value of approximately £1.50/kW.

Using this basis as a proxy for determining the actual value of avoided transmission investment as a result of a generator choosing to connect to a distribution network, this can be estimated to be in the region of between £6.50/kW and £7.25/kW.

Clearly, under the prevailing transmission charging arrangements, the value of revenue recovered from the residual elements of transmission tariffs results in tariffs

[8] http://www.ofgem.gov.uk/Networks/Trans/PriceControls/TPCR4/ConsultationDecisionsResponses/Documents1/16342-20061201_TPCR%20Final%20Proposals_in_v71%206%20Final.pdf

which provide an incentive from a charging perspective alone, for a generator to 'embed' within the distribution networks far in excess of the actual savings in transmission investment that would be realised.

This modification proposal is not seeking to review the baseline treatment of embedded generators with respect to the TNUoS charging, but is based on the principle that, whatever the baseline is, embedded transmission should be charged consistently.

5.0 Modification

This modification would change charges for Exemptible generators connected to Embedded Transmission so that their charges are consistent with embedded generators. To implement this modification the following changes would be required to the Use of System Charging Methodology.

Chapter 2 - Paragraph 2.76 would need to be updated to make it clear that the pass through of the OFTO costs for Exemptable Embedded Transmission Generators is not included in the 27:73 split for generation and demand.

Chapter 4 - Relevant Exemptable Embedded Transmission Generation will need to be made an exception to paragraph 4.6. To ensure that Exemptable Embedded Transmission Generators are paid demand charges in the same way as Exemptable Generators with BEGAs they would need to be included in paragraph 4.7 and 4.11.

Chapter 5 - The liability for Exemptable Embedded Transmission generators to pay generation charges will need to be removed from 5.1.

A new chapter will need to be added to cover the charges for embedded transmission. ETUoS will be removed from the chapter on Generation and included in this chapter to ensure that whilst Exemptable Embedded Transmission Generators are not paying the other generation charges they will pay ETUoS. This embedded transmission chapter will also need to include the liability to pay the pass through of the OFTO costs for the offshore embedded transmission.

A definition for Exemptable Embedded Transmission Generators will need to be introduced in the glossary.

Suggested text to change the charging methodology can be found in Appendix One of this consultation.

6.0 National Grid Initial View

Whilst National Grid agrees that there is a difference in the treatment of onshore embedded generators and offshore embedded transmission generators, National Grid believe this issue is caused by a lack of cost reflectivity in the charging for onshore embedded generators and not an issue with the offshore charging regime. Therefore National Grid does not support this proposed modification.

The proposed modification would move further away from a cost reflective solution for offshore which in our view is inconsistent with our Licence Conditions. The issue of different treatment between directly connected and embedded generators is wider reaching than embedded transmission. National Grid believes the issue of potential discrimination between directly connected and embedded generators should be covered through a change that looks at this issue as a whole rather than one single issue.

Offshore is not the only location where Exemptable generation connected to 132 kV transmission does not receive embedded benefits, generators in Scotland connected to transmission at 132kV do not receive embedded benefits either. It would seem most sensible to resolve these two issues through a single review.

A separate pre-consultation will be published in similar timescales as this document which will begin the process to develop a broader solution to embedded generation issues. This pre consultation principally focuses on the potential discrimination between generators connected to the transmission network and embedded generation.

This pre-consultation covers all generation and because of this broader scope may potentially require a CUSC change and would not be implemented till April 2011. The issue of discrimination between embedded and directly connected generators will be covered under this review.

Views are specifically requested on whether the issues discussed under GBECM-22 would be better resolved through a wider review of embedded generation?

To ensure clarity across the codes were the Authority to approve P242 it would be consistent to put GBECM-22 to the Authority for decision.

6.1 Assessment of options against relevant objectives

Option	Facilitates Competition			Cost Reflectivity	Developments in the transmission business
	Transparency	Predictability	Stability		
GBECM-22	✘	-	✓	✘	✘

Transparency – The proposed modification will make the charging methodology more complex with special exceptions for one quite specific type of generation and a new charge in the connections methodology. The change would lead to an inconsistency in the treatment of directly connected generators.

Predictability – If the proposed change were made it would not reduce or improve the predictability of charges.

Stability – The proposed modification would make charges for Exempt Embedded Transmission Generators similar to the charges they faced in the previous year so would have a significant impact on the stability of the charges for these generators. As the generators would not be included in the changes in revenue flows at Offshore Go Live there would be a very minimal reduction in the impact of the introduction of offshore charging.

Cost reflectivity – The embedded benefits received by Exempt Embedded Generators is not cost reflective of their impact on the wider transmission network. Introducing a modification to make Exempt Embedded Transmission Generators consistent with a type of generator which is not cost reflective does not seem the best approach. The arrangements under Go Live would be more cost reflective although further analysis is expected to be done under SLC13 to investigate this issue further.

Developments in the transmission business – This modification would be unwinding parts of a previous modification (GBECM-08) to the charging methodology which was introduced to take into account the development of new arrangements for offshore transmission. This modification would be taking a step back towards the previous arrangements which did not take the development of the offshore regime into account.

7.0 Responses

Comments and views are invited on all of the issues raised in this consultation document. To ensure that your comments and views are considered, responses must be received by close of business on **9th February 2010**.

Views are particularly invited on:

Whether offshore Exemptable generators would be unduly discriminated against when the new arrangements Go Live?

Whether charges for embedded transmission generators should be consistent with directly connected generators or embedded generators?

Whether the issues discussed under GBECM-22 would be better resolved through a wider review of embedded generation?

If you wish to provide comments on this consultation document, responses are preferred via email to: sarah.a.hall@uk.ngrid.com

If you have further queries, please do not hesitate to contact Sarah on 01926 654196.

Appendix One – Suggested Methodology Drafting

Current Methodology text is shown in black. Changes to the Use of System Charging Methodology are shown in red. Notes are shown in blue. Only paragraphs with significant changes are shown. Some further changes would be required to the numbering of the paragraphs which is not shown below.

Chapter 2: Derivation of the Transmission Network Use of System Tariff

2.76 The total revenue to be recovered through TNUoS charges is determined each year with reference to the Transmission Licensees' Price Control formulas less the costs expected to be recovered through Pre-Vesting connection charges and the pass through charges associated with embedded transmission. Hence in any given year t, a target revenue figure for TNUoS charges (TRR_t) is set after adjusting for any under or over recovery for and including, the small generators discount is as follows:

$$TRR_t = R_t - PVC_t - SG_{t-1} - ET_t$$

Where

TRR_t = TNUoS Revenue Recovery target for year t

R_t = Forecast Revenue allowed under National Grid's RPI-X Price Control Formula for year t (this term includes a number of adjustments, including for over/under recovery from the previous year). For further information, refer to Special Condition AA5A of National Grid's Transmission Licence.

PVC_t = Forecast Revenue from Pre-Vesting connection charges for year t

SG_{t-1} = The proportion of the under/over recovery included within R_t which relates to the operation of statement C13 of the National Grid Transmission Licence. Should the operation of statement C13 result in an under recovery in year t – 1, the SG figure will be positive and vice versa for an over recovery.

ET_t = The pass through costs associated with embedded transmission (Chapter 6 ETUoS and Exemptable Embedded Transmission Generator charges)

Chapter 4: Demand Charging

Power Stations with a Bilateral Connection Agreement and Licensable Generation with a Bilateral Embedded Generation Agreement

4.6 The demand charges for a Power Station with a Bilateral Connection Agreement (except Exempt Embedded Transmission Generators) or Licensable Generation with a Bilateral Embedded Generation Agreement will be based on the average of the net import over each Triad leg of the BM Units associated with the Power Station (in Appendix C of its Bilateral Connection Agreement or Bilateral Embedded Generation Agreement, including metered additional load) during the Triad.

Exemptible Generation with a Bilateral Embedded Generation Agreement, Derogated Distribution Interconnectors with a Bilateral Embedded Generation Agreement and Exemptable Embedded Transmission Generators

4.7 The demand charges for Exemptible Generation with a Bilateral Embedded Generation Agreement, Derogated Distribution Interconnectors with a Bilateral Embedded Generation Agreement and Exemptable Embedded Transmission Generators will be based on the average of the metered volume of each BM Unit specified in Appendix C of the Bilateral Embedded Generation Agreement during the Triad.

Half-hourly metered demand charges

4.11 For Supplier BMUs and BM Units associated with Exemptible Generation with a Bilateral Embedded Generation Agreement, Derogated Distribution Interconnectors with a Bilateral Embedded Generation Agreement and Exemptable Embedded Transmission Generation, if the average half-hourly metered volume over the Triad results in an import, the BMU will be charged the amount of the relevant kW tariff multiplied by the average import. If the average half-hourly metered volume over the Triad results in an export, the BMU will be paid the amount of the relevant kW tariff multiplied by the average export. For the avoidance of doubt, parties with Bilateral Embedded Generation Agreements that are liable for Generation charges will not be eligible for a negative demand credit.

Chapter 5: Generation Charging

Parties Liable for Generation Charges

5.1 The following CUSC parties shall be liable for generation charges:

i) Parties of Generators that have a Bilateral Connection Agreement with National Grid (except Exemptable Embedded Transmission Generators).

ii) Parties of Licensable Generation that have a Bilateral Embedded Generation Agreement with National Grid.

iii) Interconnector Asset Owners that have a Bilateral Connection Agreement with National Grid and/or Interconnector asset Owners of Interconnectors capable of exporting 100MW or more to the Total System.

ETUoS would be removed from the Generation Chapter and an additional chapter for Embedded Transmission would be added. This new chapter contains the current text for ETUoS and an additional paragraph for Exemptable Embedded Transmission Generators.

Chapter 6: Embedded Transmission

6.1 In addition to Demand and Generation charges, Generators connected to embedded transmission are liable to pay for pass through costs. These pass through charges are not included when calculating the 27:73 split between Generation and Demand.

Embedded Transmission Use of System Charges (ETUoS)

6.2 The ETUoS charges are a component of Use of System charges levied on offshore generators whose offshore transmission connection is embedded in an onshore distribution network. The charge relates to the provision and use of the onshore distribution network.

6.3 The purpose of ETUoS charges is to pass through the charges that are levied by the DNO on the GBSO to the offshore generator(s). This charge reflects the charges levied by the DNO for the costs of any works on and use of the DNO network in accordance with the DNO's charging statements and will include, but is not limited to, upfront charges and capital contributions in respect of any works as well as the ongoing and annual Use of System charges for generation connected to the distribution network.

6.4 The specific nature of the ETUoS charge and the payment profile for these will depend upon the charging arrangements of the relevant DNO and reference should be made to the relevant DNO's charging statement.

6.5 Where a DNO's charge relates to more than one offshore generator, the related ETUoS charge will be pro-rated based on the TEC of the relevant offshore generators connected to that offshore network.

6.6 Invoices for ETUoS charges shall be levied by the GBSO on the offshore generator as soon as reasonably practicable after invoices have been received by the GBSO for payment such that the GBSO can meet its payment obligations to the DNO. The initial payments and payment dates will be outlined in a User's Construction Agreement and/or Bilateral Agreement.

6.7 As the ETUoS charges reflect the DNO charges to the GBSO, such charges will be subject to variation when varied by the DNO. Where the User disputes regarding the ETUoS charge please note that this will result in a dispute between the GBSO and DNO under the DCUSA.

Exemptable Embedded Transmission Generation

6.8 Exemptable Embedded Transmission Generators are liable to pay a pass through for any charge the GBSO pays to the Offshore Transmission Owner for the Offshore Transmission that the generator is connected to. These charges will be circuit specific.

Glossary

Exemptable Embedded Transmission Generator	An Exemptable generator who is the sole User of Offshore Transmission which connects into a distribution network.