



WORKING GROUP REPORT

CUSC Amendment Proposal CAP163

Transmission Access – Entry Capacity Sharing

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Prepared by	Transmission Access Working Group 1

Responses to this company consultation should be sent to patrick.hynes@uk.ngrid.com by xx December 2008.

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1.0 SUMMARY AND RECOMMENDATIONS

Executive Summary

- 1.1 The proposed Original CAP163 Transmission Access – Entry Capacity Sharing seeks to introduce a zonal transmission access product, allowing generators to connect without wider transmission system access rights and facilitating intra zonal access Sharing between generators on a 1:1 basis.
- 1.2 The sharing of rights would be facilitated by the introduction of arrangements to allow generators to connect via a local only connection, without wider system access rights. Such a generator would instead share the wider rights provided to an existing generator. The local only application would permit Users to become connected and begin to operate before any ‘wider’ reinforcement works are completed on the transmission system. The charging arrangements associated with these local works, which do not form part of the CUSC, have been formulated to allow for efficient charging of variations arising from a generation User’s choice (design variations) and also ensure that Users who share zonal transmission rights, or use short-term rights to access the transmission system, contribute proportionately to the additional assets required.
- 1.3 The process for notifying National Grid of Entry Capacity sharing arrangements between Users has been discussed and the Working Group has agreed that to expedite its introduction, the Original Amendment should adopt a simple, codified approach.
- 1.4 The original amendment proposal envisaged that transmission access would be zonally defined. Working Groups 1 and 3 have both concluded that the zonal option cannot be implemented without a significant risk of unacceptable constraints. Therefore both Working Groups have agreed that an alternative nodal version of the amendments should be presented.
- 1.5 The Working Groups have consulted in accordance with the CUSC and the responses are included as Volume 2 to this report.

Working Group Recommendation

- 1.6 The Working Group believes its Terms of Reference have been completed and CAP163 has been fully considered. The Working Group unanimously agreed that the WGAA was better than the baseline and also better than the Original proposal. At the final meeting on 18 November 2008 fifteen working group members cast votes.

Voting Results	For	Against	Abstain
Original better than Baseline	5	10	0
WGAA better than Baseline	15	0	0

- 1.7 The Working Group also voted on which of the Original or the WGAA’s better meets the CUSC applicable objectives:

Voting Results	For
Original best	0
WGAA best	15

- 1.8 The Working Group recommends to the CUSC Panel that:

- A consultation report containing the CAP161 Original, WGAA1, WGAA2 and WGAA3 should proceed to wider Industry Consultation as soon as possible.
- The Working Group report is accepted by the CUSC Panel and the Working Group is disbanded once legal draft has been agreed.

Responses

- 1.9 Parties are requested to respond to this Working Group consultation by the date on the front cover to Patrick Hynes at patrick.hynes@uk.ngrid.com, or send written responses to

Patrick Hynes
UK Transmission Commercial
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

If you have any queries please do not hesitate to contact Patrick on 01926 656319. All Responses will be published on National Grid's website and included in the final report to the CUSC panel.

- 1.10 Following acceptance of the Working Group report by the CUSC Panel National Grid will carry out a Company consultation.

2.0 PURPOSE AND INTRODUCTION

- 2.1 This Report summarises the deliberations of the Working Groups, describes the Original CAP163 Amendment Proposal as well as the Working Group Alternatives and details the responses to the Working Group Consultation.
- 2.2 CAP163 was proposed by National Grid and submitted to the Amendments Panel for their consideration on 25th April 2008. The Amendments Panel determined that the proposal should be considered by a Working Group and that the Group should report back to the Amendments Panel meeting within 3 month(s) following a period of Working Group Consultation. The Panel and Ofgem subsequently agreed a further 2 month extension to these timescales.
- 2.3 The Panel established a Working Group (also known as “Working Group 1”) to assess CAP163. In addition the Panel established a separate Working Group (known as “Working Group 3”) to assist the CAP163 Working Group in developing enabling changes associated with CAP163 in parallel with the CUSC amendment itself. Working Group 3 is a sub-group of Working Group 1 and Working Group 2 (separately constituted and looking at the nature and allocation of longer term transmission access rights). As well as CAP163, Working Group 1 was also tasked with reviewing a number of other short term transmission access amendment proposals. A copy of the Terms of Reference for Working Groups 1 and 3 is provided in Annex 3. The CAP163 Working Group considered the issues raised by the Amendment Proposal and considered whether the Proposal and the Working Group Alternative better facilitated the Applicable CUSC Objectives.
- 2.4 This Working Group Report has been prepared in accordance with the Terms of the CUSC. An electronic copy can be found on the National Grid Website, www.nationalgrid.com/uk/Electricity/Codes/, along with the Amendment Proposal Form. A copy of Working Group Consultation responses are contained in Working Group Report Volume 2 on the National Grid Website, www.nationalgrid.com/uk/Electricity/Codes/.

3.0 PROPOSED AMENDMENT

- 3.1 The full text of the CAP163 amendment is set out in Annex 5. The Original CAP163 seeks to introduce a zonal transmission access product, allowing generators to connect without wider transmission system access rights and facilitating intra zonal transmission access Sharing between generators on a 1:1 basis via “Entry Capacity Sharing”.
- 3.2 A local only application will allow Users to become connected and begin to operate before any ‘wider’ transmission reinforcement works are completed. The definition of ‘local’ was not included in the proposal, leaving this to be agreed by the Working Group. However the proposer of CAP163, National Grid, suggested that ‘local’ works would be those that facilitated the efficient exchange of entry transmission rights between Users within a zone on a 1:1 basis and facilitated Users gaining access to the wider transmission system rights through other products (redistributed long-term transmission rights or additional short-term transmission rights).
- 3.3 Zonal access rights would establish transmission access on a zonal rather than a nodal level. This will be achieved by monitoring / settling transmission access on a zonal, company level. Therefore zonal transmission access rights would implicitly introduce intra zonal access sharing on a 1:1 basis for an individual User. “Entry Capacity Sharing” would also extend this concept of sharing to multiple Users. It is envisaged that a new Zonal Definition Methodology would be established to govern the definition of the zones. These zones would be applicable across all zonal transmission products and associated charges. Moving to a zonal rather than nodal transmission access regime and allowing parties within a zone to transfer access between each other on a 1:1 basis has the potential to create additional constraints and the analysis in the assessment phase has sought to quantify this.
- 3.4 The process for notifying National Grid of “Entry Capacity Sharing” arrangements between Users was to be considered and agreed by the Working Group. The Original proposal highlighted three possible models, such as: (i) codifying the sharing through a new CUSC form (ex ante); (ii) notifying explicit transfer of transmission rights ex ante; or (iii) ex post notification of transferred transmission access rights.

4.0 SUMMARY OF WORKING GROUP 1 DISCUSSIONS

- 4.1 Working Group 3 focused on the definition of local and the definition of a zonal access right, whilst Working Group 1 focused on the process for notifying sharing. Under the Transmission Charging Methodologies Forum (TCMF), Working Group 3 also dealt with most of the charging issues associated with CAP163, such as local charging and charging of the residual tariff. Those aspects of Working Group 3 work that relates to CAP163 are contained in section 5 below. This section includes some comments and discussion at Working Group 3, from 4.25 onwards, mainly associated with the nodal exchange rates as proposed by WG3.

Notification process

- 4.2 National Grid presented three options for notifying access sharing arrangements:
- codified;
 - ex ante; and

- ex post.

- 4.3 Each of these had been highlighted as an option by the proposer, with the Working Group to consider which would best meet the CUSC applicable objectives for introduction of sharing.
- 4.4 It was recognised that sharing is ultimately a reversible trade between two parties. The codified approach seeks to formalise the arrangements between the parties and so minimise the interface required with National Grid and thus the short-term transaction costs. This also provides the parties involved in the agreement, the option of sharing access rights up to real time (subject to Grid Code requirements for Physical Notifications). The ex ante and ex post arrangements are essentially trades notified in different timescales.

Codified

- 4.5 The Working Group discussed how under a codified approach National Grid would be able to identify who was responsible for overrun, whether that be the donor or the recipient.
- 4.6 National Grid proposed that this could be derived from a rule contained in the relevant agreement. It was envisaged that the agreement between National Grid and the Users would contain a hierarchy, for example: if party A 'the donor' is not using access rights, then party B 'the recipient' can use them. This could be a fixed amount or a variable amount. The intention was that the parties avoided notifying National Grid of the exact holding at any time and so had maximum flexibility of use close to real time. It was noted that this issue was similar to the reallocation process in the BSC.
- 4.7 This approach ensures that each User is responsible for their own generation position, with the System Operator (SO) able to calculate which parties are generating above their holding of access rights.
- 4.8 Some Working Group members were concerned about the lack of flexibility associated with the hierarchy approach and proposed 'lead party' responsibility. Under this approach, a 'lead party' would be identified for each sharing arrangement and that lead party would take on the associated obligations, including the consequences of any generation above the shared access right holding. Whilst this approach is more flexible than the hierarchy approach, it would mean that the lead party would be required to take the "overrun" responsibility for other Users. Some Working Group members believed that this would be problematic since an ability to use shared long-term access rights and/or overrun would be useful.
- 4.9 The Working Group agreed that the hierarchy and lead party approaches both had merit and therefore recommended that both options be included within the codified approach.

Ex ante and ex post

- 4.10 It was suggested for the ex ante and ex post options that a central system could facilitate the trades between parties, also notifying the SO and managing the financial risks associated with trades. It was also suggested that the SO could offer access into this central market, thereby facilitating SO release. Furthermore the SO could remove access from the market through the central system. The advantage for the SO would be that the central system is anonymous, thereby limiting the opportunity for market abuse. While National Grid did not need to know before the event which party had

access, individual generators would need to agree between themselves prior to gate closure.

- 4.11 From a process perspective, ex post notification made little difference to the SO apart from the interaction with the calculation of overrun costs (depending on the overrun pricing model, it could delay calculation of overrun prices), however from a participant behaviour position it could have significant downsides.
- 4.12 As volumes were traded post event, a small number of remaining parties could face increasing costs as a result of not trading, depending on the overrun pricing model. Divorcing the access product in the BM could create some negative incentives, and further consideration was required as to how ex post trading impacts on constraint actions in the [GBSO] control room. For example, when the SO constrains a party off to facilitate overrun, the constrained off party can further benefit from selling its access to a party overrunning, suggesting that bids from the [GBSO] control may need to explicitly remove access rather than just adjusting the output.
- 4.13 In terms of timescales it was questioned how useful a short period of ex post notification would actually be, given the need for parties to manage a trade and the interaction with metered flows. Some members of the Working Group expressed concern that the disadvantages of ex post trading outweighed the potentially small incremental benefit of providing parties with further flexibility. In terms of a transaction fee, the general view was that this should be avoided subject to the proportionality of the variable cost it introduced.
- 4.14 A single notification by the donor was considered reasonable by the Working Group. It was suggested that parties would require a notification confirmation (possibly to both parties), at least to the donor.
- 4.15 The Working Group agreed that the minimum lead time for ex ante notification could be right up to gate closure, to ensure alignment with contracted positions and Physical Notifications (PNs). Systems should also be capable of allowing notification up to 7 days in advance, and these could be changed by a counter notification. The expectation is that all trades (volumes, donor, recipient & period) would be published soon after real time. The minimum trading period would be ½ hour.

Interaction between Sharing and Overrun

- 4.16 The Working Group discussed the interaction between sharing and overrun at length. The key issue from the discussion was that without overrun, one party could cause another party to be in breach of the CUSC by generating more than agreed, such that the aggregated level of generation from those sharing is above the access right holding.
- 4.17 The Working Group agreed that Users sharing access rights could not practically 'back off' the 'breach of CUSC' provision contractually, meaning that the value of sharing was significantly limited. Overrun addressed this by introducing a charge for output above the access right holding, which could be 'backed off' in a bilateral agreement between the Users' that are sharing access rights. It was noted that the breach provisions of the CUSC could be amended in some way to address the breach issue, should overrun not be introduced in parallel.

- 4.18 The Working Group discussed various options to deal with this issue, and agreed the following principles:
- Should a material breach of shared rights occur, National Grid would instigate the process contained in section 5.4 of the CUSC. It would be at National Grid's discretion what "material" meant in this context in line with the existing provisions.
 - National Grid would discuss the breach with the parties and determine who was responsible for it. Should a party be identified, it would be subject to the remaining provisions of section 5.4 of the CUSC which relates to the receipt of undertakings from the User not to repeat the breach and ultimately, the de-energisation of that User in the event of a further breach.
 - If the identity of the party responsible for the breach could not be agreed, then the donor of the shared TEC would be held accountable. Therefore, any further breach provisions would be directed at this party.
 - It was agreed that the Working Group would not seek to formalise any timescales for this process over and above the existing timescales in section 5.4.
- 4.19 The Working Group accepted that these breach provisions were not ideal, but represented a proportionate solution to the issue. It was agreed that a more robust solution could be developed in due course, if the need arose, through the raising of a further amendment to the CUSC.
- 4.20 In the context of ex post notification, in an overrun model a generator would be managing exposure, without overrun the generator would be a distressed buyer given the consequences (breach). The Working Group expressed concerns that this would place access holders ("the donor") in a very strong position and possibly create or exacerbate market power issues.

Open sharing model

- 4.21 An alternative, previously discussed at the Transmission Access Standing Group (TASG) was presented¹ to the Working Group, the open sharing model. In this model existing parties would release unused access to the System Operator at the commoditised (£/MWh) long-run price. The System Operator would then reallocate this access. The key to this model is that the parties releasing access and receiving access have no relationship, the trade is facilitated through the System Operator, and the trade price is an administered long-run cost rather than short-run value. It was noted that in negative zones Users would have to pay to give up unused capacity. The Working Group was mindful that access may not generally be restricted in these negative zones. If generators could trade access at value in advance, this model becomes the last chance trade at a default rate – 'use it or lose it' with an administered payment if the access is taken up.

Efficient investment signals (generation, transmission & interconnectors)

- 4.22 The majority of the Working Group believe that sharing is very much intended to promote an efficient level of transmission investment i.e. it recognises that there is likely to be a much higher margin of generation over demand in the future and it is efficient for generators that will not need to run at the same time to share their transmission access.

Working Group 1 conclusions

¹ <http://www.nationalgrid.com/NR/ronlyres/D99361C9-F96E-4B58-8B5F-AD7AE3B6C404/26732/Opensharing23062008.pdf>

- 4.23 The Working Group agreed that the codified notification approach would be the most efficient and proportionate “day 1” solution and therefore this was adopted as the Original amendment proposal. The Working Group agreed that this would include both the hierarchy and lead party options as described above.
- 4.24 The Working Group agreed that there may be a need to consider the other notification options again in the future, when the level of sharing can be better established.

Application process of capacity entry sharing

- 4.25 Working Group 3 considered the application for a node to node exchange rate. It was proposed that a joint application would be submitted to National Grid detailing:
- Maximum capacity to be exchanged (MW);
 - “From” node;
 - “To” node; and
 - Duration of trade (whole week multiples, Monday to Sunday)
- 4.26 Working Group 3 discussed timescales and concluded that to ensure SO release of short term access rights can be assessed against a stable background, entry capacity sharing must be concluded by five weeks ahead of real time. The application process would have the following stages; Application submitted, SO analysis, Notification to Users, Users accept/reject. The required duration for SO analysis will depend upon the duration of the capacity exchange period:
- Longer than 9 months: 9 weeks
 - Between 6 and 9 months: 6 weeks
 - Between 3 and 6 months: 5 weeks
 - Less than 3 months: 3 weeks
- 4.27 Notification to the User will occur 6 weeks and 1 business day before real time and the User will have 7 days to accept or reject. For applications requesting durations beyond the current year, assessment will be against the SQSS planning criteria and there will be a three month assessment period followed by a maximum of two weeks for User acceptance.
- 4.28 Working Group 3 concluded that the treatment of interactive exchange rate offers should be consistent with existing arrangements for long-term access rights, namely allocation should be awarded to those that sign first and in the case when two applications are signed at the same time, the first submitted application will be successful. Two other alternatives were considered (pro rata or auction) but the Working Group agreed that the first come first served arrangements would provide a proportionate starting point, with further development to be considered in the future as experience of the sharing arrangements is gained.
- 4.29 The exchange rate calculation will be made on the basis of not increasing socialised constraint costs or sterilising capacity on boundaries. A Working Group member asked for confirmation of the materiality or a de minimis value for the test based on not increasing socialised constraint costs. The Working Group agreed that, given the development of the test to include a requirement to avoid sterilising capacity on boundaries, there would be no need for de minimis value. In addition it was concluded that agreed exchange rates should be used for the background for future application assessments.

- 4.30 The application fee payable is related to the duration of the entry capacity sharing period, consistent with the current Temporary TEC Exchange arrangements. For 2008/9 the TTECE request fees are:
- Longer than 9 months: £45,000
 - Between 6 and 9 months: £30,000
 - Between 3 and 6 months: £25,000
 - Less than 3 months: £15,000
- 4.31 A respondent to the Working Group consultation asked how do sharing parties locate each other and can National Grid facilitate a process where parties are able to broker deal and match people together? Working Group 3 agreed that the existing Temp TEC exchange process could be used as a mechanism where the donor advertises availability on the website. As exchange rates are best when electronically proximate, its likely that a register will be sufficient to make opportunities known i.e. there will only be so many parties that one can feasibly trade with

5.0 SUMMARY OF WORKING GROUP 3 DISCUSSIONS

Generation zoning

- 5.1 National Grid recommended that in light of the proposed suite of CUSC Transmission Access Review Amendments (namely CAPs 161, 162, 163, 164, 165 and 166), it might be appropriate to move away from the existing TNUoS generation zones and develop a set of zones which better facilitate the release of transmission access via SO Short-term Entry Rights (CAP161), Entry Overrun (CAP162), Entry Capacity Sharing (CAP163), Long-term Finite Rights (CAP165) and Long-term Entry Capacity Auctions (CAP166). To help facilitate this work on zones the CUSC Amendment Panel established a separate group, known as Working Group 3, to assist Working Groups 1 and 2.
- 5.2 At the second meeting at Working Group 3 on 27th May 2008, National Grid introduced two separate generation zoning options in the form of: (i) a Scenario-based Zoning Methodology (“SZM”); and (ii) a Network-based Zoning Methodology (“NZM”). Both methodologies were proposed on the assumption that:
- local reinforcement works required to connect a generator to the MITS (and therefore make use of transmission capacity) are achievable;
 - the resulting zones facilitated TEC exchanges within zones on a 1:1 basis; and
 - limits (MW) at points of connection can be ‘aggregated’ in terms of their effects on wider transmission system constraints.

Scenario-based Zoning Methodology (“SZM”)

- 5.3 The SZM considered the actual boundary constraints of the transmission system and followed the process of: (i) identifying candidate boundaries; (ii) identifying critical circuits for these boundaries based on the required transfer level specified within the GB SQSS; (iii) the calculation of sensitivity factors at all nodes with regard to critical circuits; and (iv) the grouping together of those nodes which have similar sensitivities.
- 5.4 In practice, candidate boundaries were identified manually based on the operational boundaries of the transmission network. The worst critical contingency and circuits were then identified against the indicative boundary. Sensitivity Factors were then calculated for each node by ‘injecting’ an additional 100MW of generation at each node within a zone and calculating

the resultant flows on each of the relevant critical circuits under a contingency. Those nodes of Sensitivity Factors within a range of 20 percent were then grouped together.

- 5.5 The advantages of the SZM were observed as being that:
- maximum tradable transmission capacity within a zone could be derived from Sensitivity Factors for the winter peak scenario;
 - the grouping of nodes of similar Sensitivity Factors into zones gives greater clarity and certainty to zonal transmission access; and
 - additional constraint costs are minimised because actual transmission network constraints are honoured.

It was also noted that the publishing of nodal Sensitivity Factors leads to an indicative economic optimisation for TEC exchange.

- 5.6 The disadvantages of the SZM were noted to be that critical circuits tend to 'move' in meshed networks and that they are scenario and contingency dependent. Additionally, it was noted that zones developed under the SZM are unlikely to remain stable over a number of years due to changes to the transmission network and the demand and generation background.

Network-based Zoning Methodology ("NZM")

- 5.7 The NZM did not consider actual transmission boundary limitations, but worked on a 'hub and spoke' principle, considering the change in voltage angles resulting from the exchange of TEC at individual nodes as the parameter for determining relevant zones. It was identified that under the NZM, zones might be considered to be less likely to change so long as the network topology and impedance of the transmission network did not change significantly. And, where the SZM studied a few 'snapshots' of the transmission system, the NZM did not rely on a specific scenario being studied, hence providing more stability to the zones in the long-term.

- 5.8 Limitations of the NZM were identified to be that the choice of hub-node used to determine the zones was critical to the zonal definition and likely to have a significant impact on a generators ability to exchange transmission access rights. Additionally, it was noted that actual transmission system constraints might not be fully reflected.

Working Group 3 discussion

- 5.9 Working Group 3 noted that a significant amount of further information and analysis of both options was required, including the estimated total effect on transmission constraints, the stability of zones and the 'liquidity' of capacity exchange.
- 5.10 Working Group 3 questioned as to whether it would be possible to overlap zones in the NZM, or even have a unique zone for each node to maximise tradability. Concern was expressed however, regarding the impact of sequential trades from zone to zone and the potential impact of this on constraint costs.
- 5.11 In addition to the SZM and NZM, Working Group 3 questioned the possibility of the publication of node to node exchange rates in preference to zoning. The presentation slides regarding the SZM and NZM can be found on the National Grid Codes website.²

²<http://www.nationalgrid.com/NR/rdonlyres/9A797D89-2BC2-459C-A3C7-744F3212109F/25954/Meeting2Zoning.pdf>

Indicative generation zones

- 5.12 At the fourth meeting of Working Group 3 on 16th June 2008, National Grid presented some indicative generation zones based on both the SZM and NZM. Zoning for regions that are radial in nature was relatively simple, the zoning process however, was much more difficult due to the presence of loop-flows.
- 5.13 It was noted that in the short to medium term (circa 2-3 years), National Grid (as the GBSO) can arrive at larger generation zones which may better facilitate the exchange of transmission access rights due to the greater certainties associated with background conditions and operational measures. In the longer-term however, it was considered that smaller generation zones would be required to cater for increased uncertainty.
- 5.14 In general, a number of key issues and findings were noted:
- Generation zones were generally different from the existing TNUoS generation charging zones.
 - Short-term zones can be much bigger than the long-term zones, and they can change from time to time.
 - In a meshed network, the effect of loop-flows may increase the percentage loadings on critical circuits and make it difficult to define zones.
 - The definition of local works will affect zoning criteria.
 - Being geographically proximate does not necessarily mean being electrically proximate, especially when substations are operated in a “split” configuration. In this instance, re-arranging of busbar sections or substation uprating may be required to facilitate TEC sharing.

Working Group 3 discussion

- 5.15 Working Group 3 noted the importance that any new zoning methodology should be suitable for all long and short-term transmission access products proposed under the suite of CAP161-166 amendments and gave consideration to the trade-off between the potential increased costs of operational constraints, the liquidity of absolute trades, and the number of nodes in each zone. It was considered that zones should be based on capability (e.g. local connection capacity) rather than obtained long-term transmission access rights (TEC or its equivalent).

Hybrid zoning methodology

- 5.16 At the fifth meeting of Working Group 3 on 1st July 2008, National Grid presented some indicative generation zones based on a hybrid (of SZM and NZM) zoning methodology, in that a critical trip was applied (under n-d) with 100MW injected at each of the rim nodes and then extracted at the hub node. Following this, the loading of all lines under a combination of every rim-rim, rim-hub pair was analysed. If a loading increased by more than 20MW, this was then considered to be a ‘sensitive’ case. The exercise was repeated for a number of other critical trips with a sense check undertaken prior to determining the zones.
- 5.17 The methodology applied to determine a set of zones was as follows:
1. Set local works and size of zones (2 of the 3 variables – excluding constraints).
 2. Identify active constraints based on existing knowledge of that selected zone.
 3. Calculate the volume of additional constraints based on:
 - NZM sensitivities;

- Load factors of buying and selling generators to calculate the volume of potential tradability.
 - Use realistic outage windows to estimate the number of hours of potential exposure to constraints.
4. Estimate the costs of constraining off and replacement energy.

Operational constraint costs

- 5.18 In addition to presenting some indicative generation zones and some of the issues surrounding the zoning process, consideration was given to the balance between facilitating transmission access tradability within zones and the consequences of constraint costs and stability.
- 5.19 Operational constraint cost is calculated based on the volume of active constraints (MWh), multiplied by the cost (£/MWh) of these constraints. It was noted that a small generation zone will lead to less trading options, though this might not necessarily be considered as a 'low' level trading. Working Group 3 members considered that a potential % cap of total zonal trades should ideally, be the same for all generation zones, although different zones may permit a far larger volume of transmission access trade for the same operational cost risk. It was considered that limits on trades would allow larger zones with more nodes, and that a limit could be set as a function of the load factor of generators, or proportions of the total transmission access capacity (MW) within a zone.
- 5.20 National Grid presented some high level analysis on the volume of additional constraints and the associated cost of this, based on a mid depth local works definition and the exchange of between 25-100% of TEC within a zone when compared to existing constraint costs of approximately £80m per annum.

Working Group 3 discussion

- 5.21 Working Group 3 noted that there is a trade-off between (i) nodal tradability, (ii) maximum zone size and (iii) how much local works must be completed prior to transmission access being allocated. For example, if a deep definition of 'local works' is applied then, as a consequence, zones are likely to be larger. It was reiterated that the existing assumption is that when transmission access is exchanged or shared, resulting in additional constraints, this additional cost will be socialised amongst all transmission system Users.
- 5.22 Working Group 3 noted that there are three different areas in the TAR proposals where local assets and works are defined: (i) within the CUSC; (ii) for local charging purposes; and (iii) within the zoning methodology. Working Group 3 considered that the disconnect between the actual local works that are required for a connection and the local charge which the User will pay may be necessary to:
- Avoid circumstances in which there would be a permanent output restriction on a generator being connected; and
 - Protect the individual generator from the actions of others or the decisions of the Transmission Owner.
- 5.23 The Working Group noted that having separate definitions may be consistent with the way in which current Construction Agreements list the incremental works required to accommodate generators, with the generator paying the Long-Run Marginal Cost (LRMC) derived from the Investment Cost Related Pricing (ICRP) transport and tariff model. However, the Working Group subsequently agreed that different CUSC and charging definitions may lead

to users getting access rights without facing the associated cost reflective charge, as described in 35.84 below.

- 5.24 Working Group 3 considered that the stability of zones was very important and therefore new generation zones should not be developed in this process on the premise that zones are acceptable at present, but there may be issues to address in the future. The presentation slides relating to the hybrid zoning methodology can be found on the National Grid Codes website.³
- 5.25 At the sixth meeting of Working Group 3 on 16th July 2008, National Grid presented some indicative generation zones, using a 'mid depth' definition of local works and a lower Sensitivity Factor limit (20%). In order to avoid significant local works reinforcement conditions, very small zones were created which based on previous Working Group 3 discussions, were considered too small. However, it was noted that to fully appreciate the 'size' of zones, it is the number of trading parties and the amount of tradable transmission access capacity within a zone that should be considered more relevant than the geographic area.
- 5.26 In parallel, National Grid presented some further analysis on indicative generation zones based on a 'deeper' definition of local works, to assess how this may increase the tradability of transmission access. Several Indicative zones were created although it was noted that it was not possible to zone certain regions such as East Anglia on the basis of the deep definition, without invoking local works designs that were economically inefficient. In general, it was considered by the Working Group that moving to a deeper definition of local works did little to increase the size of zones and the potential liquidity of access sharing.
- 5.27 Working Group 3 noted that stability at nodes is important, but the possibility of considering (i) nodes with existing generation and (ii) nodes with signed applications (to connect to the transmission system at some date in the future) should be explored. This was not necessarily perceived to provide stability to zones beyond a 3 to 5 year period, but it was deemed workable if a fully automated and transparent model can be made publicly available to the industry.

Generation zoning and nodal exchange rates

- 5.28 At the seventh meeting of Working Group 3 on 29th July 2008, National Grid recapped on the generation zones which had been presented to date, noting that these were based very much on existing generation centres, existing demand centres and radial spurs.
- 5.29 When identifying the generation zones, a number of factors had been raised as requiring consideration, particularly as to whether generation zones should be developed with a view to them being short-term or long-term, and whether they should be based on physical transmission system boundary limits or the additional constraint costs that these would be likely to produce. Given the complexity of zoning, attention of Working Group 3 turned to giving consideration of inter-zonal TEC exchange of transmission access and even the possibility of nodal TEC exchange of transmission access.
- 5.30 The options considered included the determination of a nodal 1:1 exchange rate based on the physical transmission network rather than generation

³ http://www.nationalgrid.com/NR/rdoonlyres/1E709B88-B313-47B7-9835-2424C283798C/26845/GenerationZoning_final_meeting5.pdf

background, which should therefore be temporally stable. This option would need to consider both long-term and short-term timescales, local charging definition and reflect network contingency analysis.

- 5.31 The second option was for a Locational Marginal Pricing (“LMP”) based approach for setting point-to-point rights. This bid-based approach can accommodate multiple constraints and payments would be made into a ‘pool’ based on the cost as compared to a hub point. Working Group 3 had concerns that the results would be volatile and that there would be less transparency behind the prices. In addition, the approach was felt to be complex.
- 5.32 Alternatively, a ‘flowgate’ approach was considered which would look at the physical capacity of constraining transmission circuits. This was felt to be a substantial change to existing transmission access rights, and with the example of around 1.5 billion nodal calculations per year required to update the Flowgate rights, Working Group 3 felt that this option was the most complex to implementation and was prone to volatility.
- 5.33 The last option considered was the use of a nodal exchange rate using a MWkm methodology. Consideration was given to using the Direct Current Load Flow (“DCLF”) transport model currently used to calculate TNUoS tariffs, to calculate nodal exchange rates for transmission access. This option involved taking into account various sets of contingencies, with the added advantage that some automation to identify all circuits was already available in the form of the Secured Load Flow model used to calculate to Global Locational Security Factor in TNUoS tariffs.
- 5.34 The weaknesses of this option were noted as being that the use of MWkm as a measure, does not equate to a critical circuit flow and as a result, overestimated transmission access exchange rates had already been identified at this early stage and would continue to be a significant risk. In addition, it was noted that there was no correlation to overloaded flow and the increase in GBSO costs that would be associated with this.
- 5.35 At the eighth meeting of Working Group 3 on 13th August 2008, as well as further developing the principle of a zonal methodology based on nodal exchange rates, National Grid introduced a zonal alternative and a nodal alternative.
- 5.36 **Nodal exchange rates:** A step by step methodology was discussed for establishing zones through grouping nodes between which the exchange rate fell within a certain range. Example exchange rates were shown for a particular approach based on specific assumptions. The approach was based upon worst-case contingencies in order to establish exchange rates, where the resultant zones would have minimal constraint costs arising from the exchanges. Transmission access exchange rates were shown for one set of possible assumptions. Working Group 3 was comfortable with the exchange rate discussed, which reflected the different impacts on a specific circuit from different nodes, but expressed concerns that under various critical trips the exchange rate may change significantly.
- 5.37 **Zonal alternative:** An alternative is to use zones that have already been defined (e.g. SYS, charging or candidate short/medium term generation zones), then the impact of such (i.e. increase in constraint costs) could be examined for an agreed suite of assumptions and scenarios. The working

group agreed that careful assumption must be made around likely projects connecting and TEC sharing behaviour.

- 5.38 **Nodal alternative:** Working Group 3 considered an ex ante nodal exchange rate approach. The total impact on constraint costs is mitigated when Users who wish to share, notify the SO of the specific nodes between which the transmission access will be shared in addition to the maximum size of trade. This allows a more robust exchange rate to be established. Once granted sharing could occur over any timescale; without exposure to nodal overrun charges.

Sharing access rights between nodes

- 5.39 Given the issues identified with establishing zones in which sharing with a 1:1 exchange rate is allowed, at the ninth meeting of Working Group 3 on 22nd August 2008, the Working Group gave some further consideration to some potential options for sharing transmission access between nodes, without the requirement for generation zones. Three models were considered (the presentation is available on the National Grid Codes website):

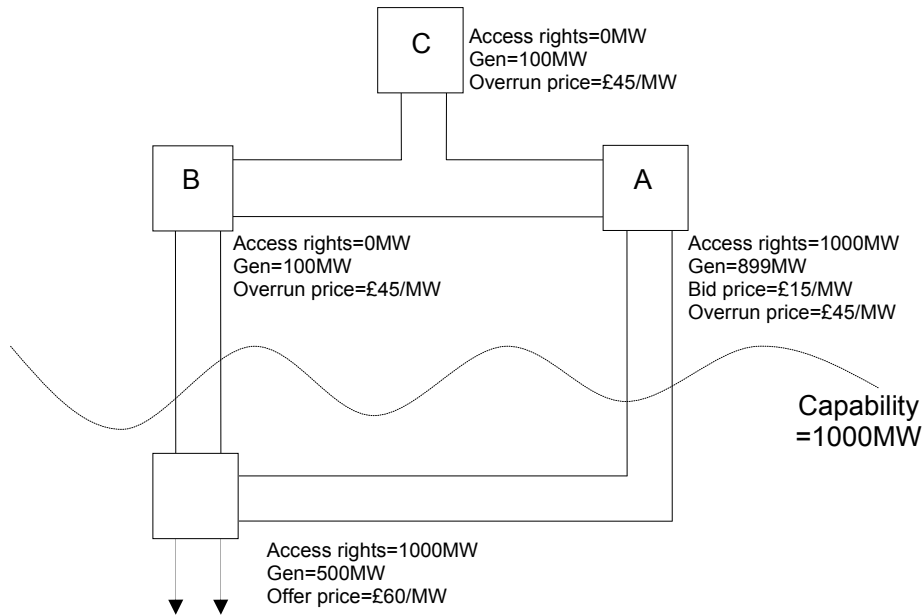
- (a) Sharing with exchange rate determined by ratio of nodal (ex post) Overrun prices;
- (b) Sharing with fixed point to point exchange rate calculated by National Grid based on known volume and duration; and
- (c) Sharing facilitated by the release of point to point transmission access rights by National Grid in investment timescales.

Exchange rate determined by ratio of nodal Overrun prices

- 5.40 Under this option, the User would notify National Grid of a sharing arrangement agreed bilaterally between two parties. National Grid would then calculate exchange rates based on (ex post) overrun prices. The results from these calculations would then form the inputs into the calculation of overrun volume.

- 5.41 Whilst overrun prices allow Users to share transmission access rights to an extent, Working Group 3 considered that there was an issue with a bilateral exchange being affected by a third party generating, which would consequently affect the overrun prices and exchange rates

- 5.42 If we consider the simplified example (shown in the diagram below) of two generators behind a constraint, generator A has long-term transmission access rights and generator B does not. The overrun price increases above zero only if the aggregate output from both generators exceeds the long-term rights held by generator A. This means that provided generator A reduces output whenever generator B wants to generate, the overrun price faced by generator B will be zero.



- 5.43 This arrangement would break-down if there was a third generator, generator C, generating without transmission access rights behind the same constraint. The output from generator C could also cause the overrun price to increase above zero, undermining the effectiveness of the sharing arrangement between generator A and generator B.
- 5.44 In these circumstances, generator A is not able to extract the full value of their transmission access rights due to the actions of a third party. This would be solved if generator A and generator B were to enter a sharing arrangement with the associated transmission access exchange rate based on the ratio of the (ex post) nodal overrun prices. Now, if generator C decides to generate, this would push the overrun price at the generator A node and the generator B node such that the exchange rate remains constant.
- 5.45 In more complex examples, the actions of generator C may cause the exchange rate between generator A and generator B to diminish, as there would be a constraint between generator A and generator B, but the value of generator A's transmission access rights at generator B's node would always be accurately reflected.
- 5.46 Working Group 3 considered the following high-level process for exchange rates determined by the ratio of overrun prices, noting that this option for sharing transmission access rights was reliant on the approval of the CUSC amendment (CAP162) to introduce overrun prices calculated in a cost reflective manner. The Working Group subsequently agreed that this option was only applicable with overrun with a marginal price, as described in the Final Conclusions from Working Group 3 below.
- (a) Users notify National Grid of sharing arrangement
- It has been assumed that a joint request for a sharing arrangement would be made by a User with transmission access rights (seeking to donate) and a User without transmission access rights (seeking to receive).
 - The request would state a 'go-live' date and 'end-date' for the arrangement, along with a maximum capacity in MW. The

- maximum capacity is included to allow a User to donate to a number of receiving Users.
- iii. The request would need to be made [x] days ahead of time to allow for the necessary administrative process to be undertaken.
 - iv. The Sharing arrangement and associated 'go-live' date and 'end-date' would need to be recorded in a central register.
- (b) National Grid calculates transmission access exchange rates based on ratio of (ex post) overrun prices
- i. For a donation of transmission access rights from node A to node B, the exchange rate would be calculated as:

$$\text{Exchange rate} = \frac{\text{Overrun price}_{\text{Node A}}}{\text{Overrun price}_{\text{Node B}}}$$

Therefore, if the power station at node A reduces output to 100MW below its total transmission access rights holding, and the overrun prices are £45/MWh at node A and £50/MWh at node B, this would provide for the following at node B:

$$100MW \times \left[\frac{\text{£}45 / \text{MWh}}{\text{£}50 / \text{MWh}} \right] = 90MW$$

- ii. This calculation would be performed for each half-hour for which the sharing arrangement is valid (i.e. between 'go-live' date and 'end date'.
- (c) Results from calculations in (b) form inputs to calculation of overrun volume
- i. It should be noted that this calculation is reliant upon overrun prices being calculated prior to the final volumes of overrun being known. (This cannot be done for the Cost Recovery methodology)
 - ii. The volumes of overrun at each node would need to be corrected for these exchange rates. If, in the example above, a generator at node B without access rights generated 100MW, this would initially be considered as 100MW of overrun, but the exchange rate would then be calculated which would essentially show a 100MW donation from node A providing 90MW of transmission access rights at node B and the overrun volume would be corrected from 100MW to (100MW-90MW=) 10MW.

Fixed point to point exchange rate calculated by National Grid

- 5.47 Whilst option 1 (exchange rate determined by ratio of nodal overrun prices) may be acceptable for Users that are reasonably (electrically) proximate, this is unlikely to be the case for generators that are further apart, due to the increased risk of a binding constraint that effects the receiving (but not the donating) generator. In order to facilitate sharing for these power stations, National Grid could calculate a fixed transmission access exchange rate that could be applied.
- 5.48 The work to investigate 1:1 sharing within pre-defined zones has identified significant risks due to actual node to node exchange rates being dependent upon:
- (a) The volume of transmission access rights shared: A node to node exchange rate calculated based on a transfer of 1MW may be incorrect for a transfer of 10MW, 100MW or 1GW.
 - (b) Other transmission access right sharing: The exchange rate between nodes A and B may be incorrect if there is a transfer between nodes C and D.

- (c) Other time dependent transmission system conditions: On the day transmission system conditions, such as demand and circuit outage conditions, also impact on node to node exchange rates.
- 5.49 In order to ensure that reasonable node to node exchange rates can be calculated, the User would need to minimise uncertainty by specifying the maximum volume of transmission access rights to be Shared and the timing and the duration of the sharing arrangement.
- 5.50 Working Group 3 considered the following high-level process for fixed point to point transmission access exchange rates calculated by National Grid.
- (a) Users apply to National Grid for a fixed exchange rate
- i. It has been assumed that a joint request for a sharing arrangement would be made by a User with transmission access rights (seeking to donate) and a User without access rights (seeking to receive).
 - ii. The Users would be liable to pay a fee to cover the cost of the analysis performed by National Grid.
 - iii. The request would state a 'go-live date' and 'end-date' for the arrangement, along with a maximum capacity in MW. As described above, the fixed duration and maximum volume information is required to cap the risk associated with the sharing arrangement, allowing the SO to calculate a reasonable fixed exchange rate.
- (b) National Grid calculates fixed point to point exchange rate
- i. The request would need to be made a number of weeks ahead of time to allow for an engineering assessment to be undertaken by National Grid (the number of weeks of analysis would depend on the duration of the exchange rate, as described in 4.26 above).
 - ii. For applications for exchange rates within the current operational year, the assessment would be based on the current transmission system and would be performed against the requirements of the operational criteria contained in the SQSS. This assessment would reflect the information that is available in these timescales, including demand level and planned transmission system outages.
 - iii. For applications for exchange rates that go beyond the current operational year, the assessment would be against the current and committed transmission system (including planned reinforcements) and would be performed against the requirements of the planning criteria contained in the SQSS.
 - iv. [Subsequently agreed that this assessment should not increase socialised constraint costs or sterilise boundary capability]
- (c) National Grid offers fixed exchange rate and user has 2 weeks to accept. If accepted, the Sharing arrangement and associated 'go-live date' and 'end-date' would need to be recorded in a central register and used in overrun volume calculations and future 'applications' for capacity/exchange rates. The appropriate charge for this was considered to be a cost-reflective fee based on the administration costs.

Point to point access rights released by National Grid

- 5.51 In the event that a fixed transmission access exchange rate provided by the aforementioned option above was considered to be unacceptably low, Users may want the Transmission Owners to invest in order to achieve a point-to-point capability. Such investment could be minor (and therefore relatively quick) when compared to the investment required to provide that same User with full entry rights.

- 5.52 In this option, a User would apply to National Grid for a transmission access right between [Node A] and [Node B] for a maximum of [x] MW and a duration of [Y] years. National Grid would then assess that application against the current planning baseline with an additional [X] MW of generation at Node A and an additional [X] MW of demand at Node B.
- 5.53 National Grid would then offer a point-to-point transmission access right to the User, with the offer including a list of reinforcement works triggered by that application. In the event that the User then accepts this offer, a point-to-point right is only available when reinforcements have been completed. The point-to-point right is recorded and used in overrun volume calculations and future 'applications' for capacity / exchange rates / point to point rights. It was considered appropriate that a User should pay the TNUoS differential between Node A and Node B for [Y] years.

Cost of Constraint Analysis on the Short/medium Generation Zones

- 5.54 The expected impact from implementation of the proposed short/medium term generation zones was presented during the tenth meeting of Working Group 3 on 12th September. An examination was made of the potential additional costs of constraints incurred as a result of transmission access sharing within zones. National Grid noted that where generators are permitted to connect to the transmission system without the requirement to undertake wider system reinforcement, this is likely to result in additional system boundary constraints and increase the constraint volumes on the existing constraint boundaries.
- 5.55 Working Group 3 considered that further thought regarding the range of assumptions was required in the pursuit of calculating the utilisation element of constraint cost. Problems with trying to make predictions about future constraint cost trends from using historic SO costs were identified. It was noted that in a zone which flips between importing and exporting, it is not appropriate to attribute a cost to the boundary constraint under a winter peak scenario as it might not always be obvious if costs are related to an export or an import. In these cases, the data used needs to be further analysed to properly attribute an export or import cost against the corresponding linear trending in export or import utilisation.
- 5.56 The locational element of constraint cost was also analysed. One to one trading was considered to be acceptable up to a point of 'headroom', beyond which a specific point to point arrangement would be required. It was noted that any trade undertaken will change the size and validity of the headroom. It was considered that this headroom figure could be fixed for a year, with some risk of an increase in constraints prior to re-calculation in the following year.

Initial Working Group 3 Conclusions

- 5.57 Prior to the eleventh meeting of Working Group 3 held on 24th September, National Grid circulated a report⁴ that examined the potential additional costs of constraints that would be incurred by the sharing of transmission access within generation zones. The additional utilisation and location costs are calculated using a set of proposed generation zones. The calculations presented have considered factors including headroom, sensitivity factors and loading curves from the generators. The results indicated a total

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<http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/workingstandinggroups/wg161-166/>

(utilisation + location elements) additional cost of constraints of about £37m per annum if trading up to the headroom level only is allowed. If trading beyond the headroom was undertaken up to 2 times the headroom, the cost of constraints could potentially rise to £1.1 billion per annum for the upper range and a potential saving of about £0.2 billion per annum for the lower range. The £0.2 billion saving is the total cost of constraint from the utilisation element plus the average historical cost of constraint that can be saved. The actual cost would vary depending on the system running arrangement, the characteristics of the generators and the duration of transmission access exchange.

- 5.58 During this eleventh meeting, a summary of the options considered was made. A zoning methodology that results in small zones, with a minimal increase in constraint costs, severely limits the liquidity of tradable capacity. The Working Group recognised that methodologies that form large trading zones provide greater tradability, although the increased operational constraint costs which could result from such zones was considered too great a risk. The remaining options are (i) Larger zones, with trading limited to headroom on a point to point and beyond basis, with an allocation process for headroom and subsequent re-allocation process following the completion of a trade, was considered as a viable option by the Working Group. The downside however, was identified as being the complexity of the arrangements which would be required, the potential for hoarding capacity and that trades would be limited to within-zone; or (ii) A nodal point to point option for the sharing of system access which the Working Group also concluded was a viable option.

Final Conclusions from Working Group 3

- 5.59 The final Working Group 3 meeting was held on the 10th November, during which the key issues and areas for further confirmation from the consultation phase were discussed. One Working Group Consultation response stated that zones will lead to increased shared constraint costs but conversely, an overly pessimistic methodology may lead to under utilisation of capacity sharing. The Working Group concurred that the analysis previously presented showed that a zonal methodology with large zones has a significant risk of increasing total socialised constraint costs. National Grid discussed how, when determining nodal exchange rates, all feasible worst case system operation scenarios must be considered, in order to meet the principle of maintaining cost levels.
- 5.60 A respondent stated that a node to node exchange rate that was significantly different from 1:1 would reduce the effectiveness of sharing. Working Group 3 concurred and reiterated that this is likely to lead to sharing to occur mainly between proximate generators and it was concluded that the exchange rate should be capped at a maximum of 1 to 1 in order to prevent the ability for a User with multiple generators to book capacity and share it in order to minimise transmission charges. A view was expressed in a consultation response that capacity entry sharing should be available in both long term and short term timescales to which the Working Group agreed, although it was recognised that exchange rates may differ between the two as certainty increases towards real time.
- 5.61 A respondent stated that a nodal exchange rate methodology must be robust and transparent, but it is felt that this may introduce unnecessary complexity and therefore cost. Whilst the Working Group agreed nodal point to point exchange rates requires a degree of complexity, ultimately it avoids the

- requirement to achieve a balance between limiting zonal tradability with an onerous headroom limit and introducing unacceptable risks through significant increases in socialised constraint costs. Working Group 3 therefore concluded that a node to node exchange rate methodology should be applied.
- 5.62 A respondent questioned how exchange rates based on zonal overrun prices would be calculated. The Working Group discussed the options for overrun pricing set-out in Charging Pre-consultation GB ECM-14 (Consequential impact of CUSC amendment proposals: CAP161, CAP162, CAP163 and CAP164). The options are:
- (i) Simple Methodology;
 - (ii) Cost Recovery Methodology; and
 - (iii) Marginal Methodology.
- 5.63 The simple methodology is based on historic constraint data, which is mapped to 24 indicative constraint zones. This means that all the nodes in a particular zone would be subject to the same overrun price. The Working Group noted that implementing node to node exchange rates based on these overrun prices would essentially allow unfettered sharing with a 1:1 exchange rate within these zones.
- 5.64 The Working Group agreed that whilst these zones may give the appropriate level of accuracy for a simple pricing methodology (where the impact is limited by the Local Capacity Nomination), the analysis performed previously would suggest that allowing sharing on this basis would cause an unacceptable increase in socialised constraint costs. For this reason, the Working Group agreed that node to node sharing with exchange rates based on the ratio of ex post overrun prices should not be an option with the simple overrun pricing methodology.
- 5.65 Where the cost recovery methodology is based on a “degut” of the actual costs performed ex post by the System Operator, a methodology is used to attribute actual costs to the volume of overrun to calculate a £/MWh overrun price. Whilst, unlike the simple methodology, this cost allocation will be nodal, the Working Group agreed that this methodology would be inconsistent with node to node sharing based on the ratio of overrun prices. This conclusion is based on concerns about the interaction between the derivation of the price and volume of overrun (i.e. it would not be possible to calculate the overrun price until the overrun volume is known, and with sharing the volume is not known until the ratio of overrun prices is determined).
- 5.66 The marginal methodology is based on a model of the transmission system which is optimised to minimise system balancing costs. The optimisation generates nodal marginal overrun prices (shadow costs). The Working Group noted that this pricing option was at an early stage of development, but agreed that provided it was developed such that truly nodal (rather than boundary based) prices were produced, then it would be appropriate for use with node to node sharing with the exchange rate determined by the ratio of nodal overrun prices.
- 5.67 In summary, the Working Group agreed that node to node sharing with an exchange rate based on the (ex post) overrun prices should only be implemented if the marginal overrun pricing option is implemented.

- 5.68 One respondent specifically sought clarification for how codification could be implemented when three or more parties are involved in the transfer if the exchange rate is not 1:1. If different exchange rates are set for each exchange (there could potentially be 6 exchange rates for 3 parties) the codified approach would need to allocate TEC between parties such that monitoring can take place. The Working Group agreed that in cases where three or more parties are involved in the share, complex arrangements would be required to ensure an efficient outcome. Furthermore, the Working Group agreed that the number of parties involved in a share should be limited to two at this stage, but that this limitation should be reviewed when there is some experience of the sharing arrangements.
- 5.69 Several respondents to the Working Group Consultation requested clarification of how node to node access capacity exchange rates would be calculated. The Working Group agreed that further illustration would provide additional clarity.
- 5.70 The Working Group agreed that the basis of the exchange rate should be to “leave the system whole” such that any spare boundary capability is not used up and there are therefore no concerns about node to node sharing arrangements sterilising boundary capability.

Offshore generation

- 5.71 Working Group 3 gave consideration to offshore generation and how this would be incorporated into zones. It was noted that offshore generation is currently being modelled at the landing point, assuming a radial connection and Grid Code compliance at the point of connection.

Governance

- 5.72 Two approaches towards the governance of a new zoning methodology were considered by Working Group 3:
1. A new Licence Condition could be written into the Transmission Licence similar to that which exists for the Use of System Charging Methodology (Standard Licence Condition C5) and the Connection Charging Methodology (Standard Licence Condition C6).
 2. The governance arrangements for the new methodology could sit in the CUSC.
- 5.73 The Working Group considered that the CUSC defines the transmission access product and since zoning is part of the definition of the product, then it would be appropriate to include this as an Annex to the CUSC. Whilst this was the preferred option, the option of a Licence Condition was not ruled out.

Local Only Connections

- 5.74 The arrangements for local connections were developed by Working Group 3, and the conclusions are described below.

Definition of Local Capacity Nomination

- 5.75 Working Group 3 proposed that for generators with local only connections, a local access product should be developed. This concept, the Local Capacity Nomination (LCN) would be the maximum capacity (in MW) to which a generator is entitled to obtain transmission access products (long-term and short-term access products and overrun) within a charging year. It was also identified that it must not exceed the Connection Entry Capacity (CEC) of that generator to avoid damage to local transmission assets.

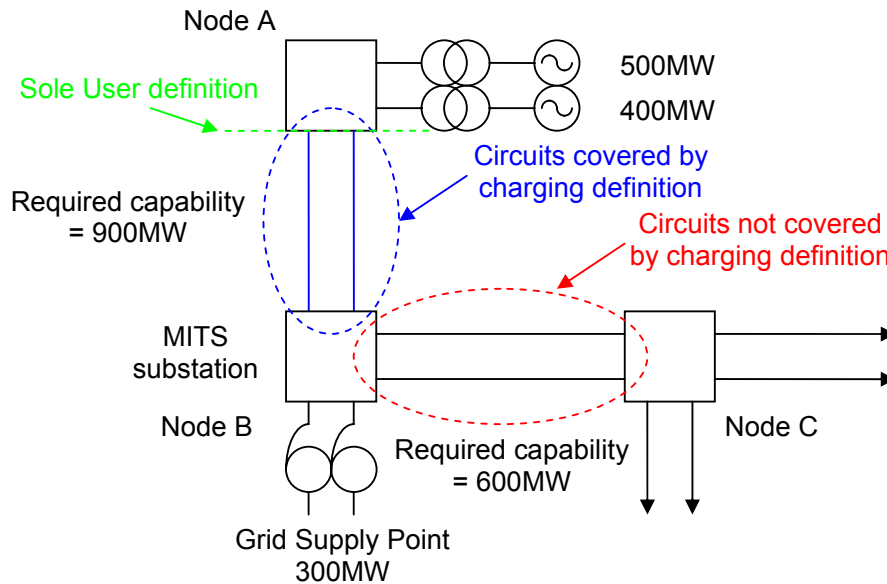
Summary of the properties of Local Capacity Nomination

- 5.76 LCN was determined by Working Group 3 to have the following properties:
- LCN is the term used by a generator to notify National Grid of its desired maximum local capacity holding in a transmission charging year;
 - LCN represents the physical (and contractual) cap on the total generators' transmission access (MW) derived from a combination of all long and short-term transmission access products, including overrun;
 - LCN will not exceed a generator's CEC;
 - LCN is defined on a Power Station basis (consistent with TEC);
 - LCN will be allocated on a first-come-first-served basis;
 - LCN will be the basis upon which a generators' local asset charge will be calculated and levied;
 - LCN is shareable between generators, when multiple generators agree to share. Any sharing arrangement would be managed with a clause which, in the case of two generators sharing, would restrict one generator if the other generator is using the local connection capacity and vice versa. This approach is similar to that currently adopted to deal with design variation connections.

Enduring arrangements for existing LCN holders

- 5.77 Working Group 3 debated as to whether LCN should be a finite right, linked (or not) to the period of firm transmission capacity obtained in an auction, or evergreen. Given that a generator may not wish to obtain long-term capacity through an auction process, it did not seem appropriate to link LCN to capacity obtained through the auction.
- 5.78 Working Group 3 considered that evergreen rights would be appropriate provided the definition of local assets is generally limited to "sole use" assets; i.e. local assets are not shareable. Where local assets (which are not shared) come to the end of their life, the TO could determine whether they should be replaced following bilateral discussions with the relevant generator. It was noted that the proposed charging definition of local works included shared use assets in some circumstances and some Working Group members believed that it might be appropriate to change the definition of local assets in these circumstances in order to ensure that they are not shared.
- 5.79 The problem with the "sole use" approach to local assets is that it may not in all circumstances be consistent with the principle of ensuring that Users which purchase short-term access products or share, make an appropriate contribution to the cost of the assets that are provided to facilitate their connection. If a "sole use" definition of local assets were to be adopted, then the cost of "spur" circuits to entry points with multiple generators will not be based on LCN (in MW). In the extreme circumstance of a generator choosing a "local only" connection at an entry point at which other generators are connected, that generator would not make any contribution to the cost of the transmission assets required to provide their connection.
- 5.80 This is shown in the below diagram. If a "sole User" definition were to be applied (this is represented by the dotted green line), neither generator would make any contribution to the cost of the spur (shown by the blue lines) required solely to provide their connection.

Potential Definitions of Local Works



- 5.81 The Working Group therefore concluded that local assets should not be limited to “sole use” assets. The Working Group considered that an alternative approach would be to use the definition from the “local generation charging” proposals contained in National Grid’s GB ECM-11 Conclusions Report, which is that local circuits are those between an entry point and the next Main Interconnected Transmission System (MITS) substations, where a MITS substation is defined as a Grid Supply Point with more than one circuit connected or a substation with more than four transmission circuits connected. In the diagram above, these local circuits are highlighted in blue.
- 5.82 In this simplified example, the circuits between node A and the next MITS substation (node B) would be defined as “local” under the charging definition. This means that the generators at node A would get access once these circuits had been reinforced to provide a secure capability of 900MW. However, the circuits between node B and node C would not be covered by the charging definition of “local”. This would lead to a permanent restriction to the output of the generators unless these circuits were reinforced to provide a secure capability of at least 600MW.
- 5.83 As described in 5.22 above, the Working Group originally considered that different charging and CUSC definitions of “local” works may be required to:
- Avoid circumstances in which there would be a permanent output restriction on generators being connected; and
 - Protect individual generators from the actions of others or the decisions of the Transmission Owners.
- 5.84 On 10th November, Working Group 3 reviewed the consultation responses, allowing further discussion to be undertaken. The Working Group expressed concerns associated with different charging and CUSC definitions of “local” works. The Working Group noted that if the CUSC definition leads to reinforcement works that go beyond the next MITS substation in order to avoid permanent restrictions, then a user with LCN only will essentially be getting transmission access without paying the associated cost reflective charge.

- 5.85 Based on this concern, the Working Group agreed that the charging definition for local works should be consistent with the CUSC definition. The Working Group noted that there were scenarios where this definition could lead to a permanent output restriction being placed on a generator and that this would be reflected in bids for short-term access being turned down, restricted sharing exchange rates and high overrun prices. The Working Group also noted that the proposals for node-to-node sharing arrangements would allow generators in this position to apply for node-to-node access rights to facilitate sharing with other generators.
- 5.86 One Working Group Consultation respondent expressed concern that the initial view was to define LCN as a finite right, stating that generally local assets should not be shareable with other generators and that finite right arrangements are only required to redistribute assets that are no longer required by a User but can be used by other generators. During the final Working Group 3 meeting, the majority of Working Group 3 agreed that an enduring right approach was appropriate for sole user assets. National Grid completed some further analysis of the existing system and concluded that, given the relatively shallow nature of local works as defined, there were very few instances in which an enduring LCN right could risk causing inefficient investment of delays to the entry of new power stations.
- 5.87 It was acknowledged that since it is a feasible circumstance that multiple Users may wish to share LCN and the associated local assets, arrangements would be required to facilitate this. Working Group 3 agreed that this could be dealt with by including access restrictions in the generators connection agreement. This is similar to the treatment currently used to deal with connection design variations. The Transmission Owner would build sufficient local assets to cope with the shared holding of LCN only.

Application processes

- 5.88 **New connections:** Existing applications for new generation connections are progressed in line with Section 2.13 of the CUSC: *New Connection Sites, based on the desired CEC and TEC of the applicant*. Following any implementation of one or more of the suite of CUSC Transmission Access Review Amendments (CAPs 161-166), it is foreseeable that a generator may wish to obtain only short-term access products following connection. Given that a generators LCN will determine the level of obtainable short-term (and long-term) transmission access, and provide the basis upon which the TO decides on an economic level of transmission investment, the concept of LCN needs to be introduced into CUSC Exhibit B: *Connection Application*. A connection application will then be progressed under the same process as any other connection application.
- 5.89 **Existing connections wishing to increase LCN:** Section 6.30.2 of the CUSC: *Increase in Transmission Entry Capacity* defines the process by which generators can currently apply to increase their TEC. Any request from a User to increase its TEC for a connection site up to a maximum of its CEC is deemed to be a modification. This approach also appears appropriate for Users wishing to apply for an increase in LCN. In the event that multiple generators were sharing LCN, the application would have to be made on behalf of all of the generators involved.
- 5.90 **Application fees:** Given the proposed changes to the transmission access regime, it is considered appropriate that the current application fees included in the Statement of Use of System Charges, should be reviewed to differentiate between connection, local, and wider transmission system

applications. Fixed and variable application fees will remain in operation. The Working Group noted in particular that generators wishing to increase LCN above their current TEC level during transition should not be exposed to the full Modification Application fee currently associated with changes in TEC.

- 5.91 **Pre-commissioning user commitment:** Working Group 3 identified that there are a number of potential options for arrangements to provide pre-commissioning user commitment:
- Cost-reflective final sums liabilities (possibly capped at the original offer);
 - A liability based on the relevant Unit Cost Allowance (UCA); or
 - A liability based on a multiple of the local generation TNUoS tariff.
- 5.92 Working Group 3 concluded that the requirement for pre-commissioning security associated with increases in LCN should be consistent with the arrangements proposed for wider long-term transmission access under CAP165.
- 5.93 The CAP165 original proposal for wider rights is a liability that ramps up over the 4 years prior to completion, to a total of 8 times the wider generation TNUoS tariff. This is reflected in the minimum booking of wider access rights to apply post-commissioning. The 8 years is derived from analysis of TNUoS tariffs against wider UCAs, which shows that, on average, the UCAs are 15 times the TNUoS tariffs. The 15 is halved to reflect a 50/50 risk sharing between generators and consumers. Consistency would imply that the same multiplier could also be used for local connections.
- 5.94 However, there is an additional rationale for 8 years being an appropriate multiplier: If local TNUoS was exactly reflective of capital costs, then a capital payment of 8 x annuitised TNUoS would cover 50% of the capital costs. This is because the TNUoS methodology converts capital sums by assuming a 50 year asset life and a 6.25% rate of return. Annual sums can be converted into a capital sum by multiplying by:
- $$(1-(1+0.0625)^{-50})/0.0625 = 15.22$$
- 5.95 If the 50% risk sharing, consistent with the CAP165 treatment for wider access is applied, the result is a multiplier of 8.
- 5.96 Local TNUoS would not recover all costs, due to Users paying for what they are using rather than what is installed. It therefore would seem appropriate that security is also provided on this basis, and that security should not be provided for TO investments made for wider system reasons.
- 5.97 The Working Group therefore concluded that, consistent with the CAP165 original treatment for wider access, pre-commissioning User commitment for local commitment should be based on a multiple of 8 years of local generation of TNUoS, profiled 25%/50%/75%/100% over the 4 years prior to completion.
- 5.98 Termination or reduction of the requested LCN would therefore result in the levying of a Local Capacity Reduction Charge, based on Local Cancellation Amounts. The Local Capacity Reduction Charge would be non-refundable.
- 5.99 The Local Cancellation Amount in each year would be a percentage of the Local Termination Amount, which is the higher of zero and eight times the relevant local generation TNUoS charge. The Local Capacity Reduction Charge would therefore be calculated as:

$$\text{Local Capacity Reduction Charge} = \text{LCN}_r \times \text{LCAM}_t$$

Where:

- LCN_r is the reduction in Local Capacity Nomination in kW.
- LCAM_t is the relevant Local Cancellation Amount which varies according to the number of full years from the Completion Date:
 - In the year prior to the Completion Date (i.e. t) $\text{LCAM} = \text{LTA} \times 100\%$, where LTA is the Local Termination Amount;
 - Where $t=-1$, $\text{LCAM} = \text{LTA} \times 75\%$;
 - Where $t=-2$, $\text{LCAM} = \text{LTA} \times 50\%$; and
 - Where $t=-3$, $\text{LCAM} = \text{LTA} \times 25\%$.

$$\text{Local Termination Amount} = \text{Max}(0, (\text{LocGenTNUoS}_n \times X))$$

Where:

- LocGenTNUoS_n is the relevant nodal Local Generation TNUoS tariff applicable to the generation project and published in the Statement of use of System Charges. If such a nodal tariff is not currently published, then the appropriate tariff will be calculated by National Grid as part of the application process, in accordance with the Charging Methodology.
- X is a multiplier, initially taking the value 8, although it may be appropriate that this be amended in subsequent price control periods.

- 5.100 Local Cancellation Amounts will be calculated using the prevailing local Generation TNUoS tariff at the time of Capacity Reduction. Capacity Reduction Charges would not apply to projects where there are no transmission asset works.
- 5.101 **Pre-commissioning security:** The introduction of generic Local Capacity Reduction Charges, defined in the CUSC to replace the existing final sums regime, defined in the bilateral Construction Agreements, will also require the introduction of provisions to define the level of financial security that should be held in relation to these potential liabilities.
- 5.102 It is therefore to add the applicable Local Cancellation Amount to each User's Security Requirement, as defined in paragraph 3.22 of the CUSC. To the extent that these amounts exceed the Allowed Credit extended to each User, Security Cover will need to be provided to National Grid, in any of the forms prescribed in the CUSC.
- 5.103 Working Group 3 noted that alternatives to the CAP165 original amendment proposal had also been developed by Working Group 2, including cost reflective final sums liabilities. The Working Group noted that should these CAP165 alternative amendments be approved, then they would also amend the pre-commissioning liabilities and security associated with LCN to be cost reflective final sums liabilities,
- 5.104 **Existing connections wishing to decrease LCN:** Section 6.30.1 of the CUSC: *Decrease in Transmission Entry Capacity* defines the process by which generators can currently reduce their TEC. Essentially, a User is entitled to decrease its TEC giving five business days notice in writing, prior to the 30 March in a financial year, with that notified decrease in TEC taking effect on 1 April of that same year. When discussing the possibility that LCN could be evergreen, the Working Group considered that this process could be

applied to LCN. (The Working Group also noted the discrepancy between the late March deadline and National Grid's requirement for charge setting data to be provided no later than 23rd December in the previous (charging) year. Had the Working Group decided to pursue an evergreen approach, it would have recommended an alignment of the notification timescales associated with TEC / LCN reduction with the TNUoS charge-setting process.

- 5.105 However, given that the Working Group concluded that LCN should be a finite right, it would not be necessary to adapt the existing process for decreasing TEC for LCN. Instead, having applied for and obtained an LCN for a finite period, a User would be committed for this period, with an obligation to pay a Local Capacity Reduction Charge in the event of termination or reduction of LCN.

Transitional arrangements to LCN

- 5.106 Working Group 3 considered three options for transition from the current arrangements to those which require a Local Capacity Nomination.

- LCN based on a generator's CEC
Given that CEC is not currently linked to transmission access allocation, this option seems the least appropriate.

- LCN based on a generator's TEC
Given that the suite of CUSC Transmission Access Review Amendments (namely CAPs 161, 162, 163, 164, 165 and 166) are potentially introducing some fundamental changes to the way in which transmission access is allocated, existing TEC may not be considered appropriate for some generators.

- Generators would notify National Grid of its desired LCN in advance of a pre-defined date

Working Group 3 concluded that this option appeared to be the most practical solution, although it was noted that the value notified will be limited to a generator's CEC. In the event that a generator did not notify National Grid of its desired LCN, the use of TEC as a default value seemed appropriate. In the instance that multiple generators wish to share an LCN, a process for notification will be required. Timescales for a generator to notify National Grid of its desired LCN value will be very much dependent on the transmission access products implemented.

6.0 WORKING GROUP ALTERNATIVE AMENDMENT

- 6.0 Given the cost risks associated with allowing "unfettered" sharing of access rights within pre-defined zones with a 1:1 exchange rate, the Working Group developed a Working Group Alternative Amendment to facilitate the sharing of transmission access between nodes, without the requirement for generation zones.

- 6.1 The Working Group alternative amendment includes the following options for node to node sharing:

- Sharing with a node to node exchange rate determined by ratio of nodal (ex post) overrun prices;
- Sharing with fixed point to point exchange rate calculated by National Grid based on known volume and duration;
- Sharing facilitated by the release of point to point transmission access rights by National Grid in investment timescales

- 6.2 The Working Group discussed the implications of a nodal model in respect of the notification mechanism and concluded that the only impact appeared to be that an exchange rate request would be a pre condition to notifying National Grid of active sharing.

7.0 ASSESSMENT AGAINST APPLICABLE CUSC OBJECTIVES

- 7.1 The Working Group considered CAP163 Original and Working Group alternative amendment against the CUSC Objectives;

- (a) The efficient discharge by the Licensee of the obligations imposed upon it by the act and the Transmission Licence:

Some Working Group members believed that sharing could lead to more optimum use of the existing transmission system and require less system reinforcement for a given generation capacity, depending upon the details of the sharing arrangements introduced.

Some Working Group members were concerned about the creation of artificially large “sharing zones” which would lead to a significant increase in constraint costs that would be borne by consumers. These Working Group members noted that node-to-node sharing with pre-defined exchange rates (where possible) would minimise this risk.

Some Working Group members believed that the introduction of sharing using a codified approach may limit flexibility but also felt that it represents a proportionate “day 1” solution.

Some Working Group members were concerned that an overly conservative assessment of exchange rates may limit the ability of users to maximise use of the existing system.

- (b) Facilitating effective competition in generation and supply of electricity and facilitating such competition in the sale, distribution and purchase of electricity:

Some Working Group members believed that sharing should allow more generation to use the GB transmission system and hence increase competition.

Some Working Group members were concerned that it may be more difficult for parties yet to connect to the transmission system to make use of sharing arrangements.

Some Working Group members felt that the in-built flexibility of the sharing product would allow more parties to complete.

Other Working Group members did not agree, stating that the complexities and lack of transparency associated with sharing will discourage investment in new generation and lead to increased risk premiums which will not facilitate competition.

Some Working Group members were concerned that ex-post node-to-node exchange rates could lead to sub-optimal results. These Working Group members favoured exchange rates requested from the SO and codified ex ante.

Some Working Group members noted that node-to-node sharing with pre-defined exchange rates (where possible) would appear to give the most cost reflective sharing. These Working Group members also highlighted the fact that no charge was envisaged for fixed ex ante exchange rates provided by the SO. They also believed that these arrangements would be more cost-reflective than zonal sharing, where increased constraint costs may be socialised.

8.0 IMPACT ON IS SYSTEMS

- 8.1 The conclusions of National Grid’s initial IS impact assessment for the Original Amendment and the Working Group Alternative Amendment are summarised below. These conclusions are indicative only and are subject to change following further analysis.
- 8.2 Costs are identified as falling into one of three broad categories (less than £500k, £500k to £1m, and £1m to £5m). Timescales are indicated by stating whether or not the necessary systems can be delivered in time (for an assumed “first run” date) given various starting dates for the projects to deliver the systems. This approach has been followed for all of the CAPs in the TAR suite in order to provide consistency.
- 8.3 During the Working Group discussions it was noted that the notification method (codified, ex ante, or ex post) would be one of the key factors in determining the complexity and reliability of the systems required to support the implementation of CAP163. The conclusions presented here are only applicable to the codified option. It should also be noted that the conclusions presented here would not be applicable if an open sharing model was adopted.
- 8.4 From an IS perspective the main difference between the Original and WGAA is the need to calculate exchange rates in WGAA. The following assumptions have been made regarding the calculation of exchange rates:
 - 1. For fixed point to point exchange rates National Grid will use existing tools to calculate the exchange rates and therefore no new systems will be required.
 - 2. For node to node exchange rates determined by the ratio of overrun prices, the overrun prices will be available. This means that the delivery of systems to calculate overrun prices is excluded from this impact assessment.
- 8.5 This assessment does take into account the delivery of systems to calculate the volumes which have been shared.

	Assumed date of decision by the Authority	First run	Months available if work begun after the Authority decision	Months available if work begun in Dec-08	Deliverable if work begun after Authority decision?	Deliverable if work begun in Dec-08?	<£500k	£500k - £1m	£1m - £5m
Original Zonal	Jun-09	Mar-10	9	15	NO	YES		•	
WGAA Nodal	Jun-09	Mar-10	9	15	NO	YES		•	

Where the above table indicates that if work starts in December 2008 it is feasible to deliver the necessary systems in time for the stated first run date, it may be assumed that any delay to the start of work would lead to an equivalent slip in the first run date.

- 8.6 There are many limitations on the scope of this initial IS impact assessment. Examples include:
1. Only the impact on National Grid's IS systems has been assessed. The impact on CUSC parties' IS systems has not been assessed.
 2. Only the costs of the projects required to deliver the necessary systems have been estimated. Additional run-the-business costs relating to IS systems are likely to be incurred, these have not been estimated.
 3. There has been no analysis of any IS effort or systems required during the transition from the existing arrangement to the new arrangements.
 4. Each CAP and each option associated with it has been assessed in isolation. The impact on time and cost of multiple projects running in parallel has been ignored.
 5. National Grid has not assessed the work against its existing IS workload to assess resource availability.
- 8.7 A more accurate IS impact assessment for the Original Amendment and the Working Group Alternative Amendment would require a number of items which are not currently available. These include:
1. Definition of the business requirements for the Original Amendment and the Working Group Alternative Amendment in more detail than has been discussed by the Working Groups.
 2. Confirmation of certain technical assumptions which have been made during the initial analysis.
 3. Identification of the combination of CAPs 161-166 that is to be implemented and for each CAP that is to be implemented whether the Original Amendment or one of the Working Group Alternative Amendments is to be implemented.
- 8.8 Without prejudicing the decision of the Authority, National Grid intends to undertake further analysis between November 2008 and March 2009. This analysis will attempt to address point 1 above by making assumptions about the most likely detailed business requirements and will attempt to address point 2 by undertaking a number of feasibility studies. To address point 3 the analysis will consider the consequences a variety of possible combinations. The results of the analysis will be made available to CUSC parties and the Authority.

9.0 PROPOSED IMPLEMENTATION

- 9.1 The Working Group proposes that CAP163 should be implemented in April 2010. The main restriction on this date is the implementation of revised charging arrangements.
- 9.2 Earlier implementation of CUSC process is considered possible if very limited volumes are involved although this would involve manual monitoring. Implementation would raise the issues addressed in 4.16 of this report with respect to Overrun (which can not be implemented until April 2010). Further consideration would be required as to whether this raised any additional charging issues as it has been assumed throughout the assessment that residual charging would be changed.

10.0 IMPACT ON THE CUSC

- 10.1 The text required to give effect to the WGAA is being developed with the Working Group. Once agreed this will be attached to the Company

consultation for wider consultation as per the requirements of the CUSC. National Grid intends to request that legal drafting for the original is not submitted in accordance with CUSC 8.19.5.

11.0 IMPACT ON INDUSTRY DOCUMENTS

Impact on Core Industry Documents

- 11.1 Grid Code: This amendment can be implemented without requiring Users to contravene existing obligations under the Grid Code.
- 11.2 STC: New processes and reconfiguration of the outage plan to accommodate early local connection will be required. The STCC is considering these changes.
- 11.3 BSC: None envisaged.

Impact on other Industry Documents

- 11.4 SQSS: Overrunning could lead to a non-compliant system and may require derogations to the SQSS. SQSS is being reviewed to establish impacts, not expected to delay implementation.
- 11.5 Transmission Licence: Within this report the possible implications on revenue flows and incentives has been identified. These are mainly transmission licence issues rather CUSC. National Grid is reviewing the possible implications for the transmission licence and will contact Ofgem directly to discuss these and agreeing an appropriate way of taking any changes forward, particular with respect to facilitating short term revenue flows through Balancing Services Use of System charges. National Grid expects that SO incentives would be taken forward as part of BSIS scheme developments, TO incentives would need to be discussed separately. These arrangements could be implemented prior to April 2010 providing initial discussion and development is not delayed until the final decision.
- 11.6 Charging methodologies: The proposals have a number of implications on charging arrangements which have been mentioned in this report. Changes are being discussed through the charging methodologies governance arrangements and are expected to be implemented by April 2010. A number of developments, GB ECM11 (local charging), GB ECM13 (residual charging) and GB ECM14, has been already been taken forward.

12.0 WORKING GROUP VIEW / RECOMMENDATION

- 12.1 The Working Group believes its Terms of Reference have been completed and CAP163 has been fully considered. The Working Group unanimously agreed that the WGAA was better than the baseline and also better than the Original proposal. At the final meeting on 18 November 2008 fifteen working group members cast votes.

Voting Results	For	Against	Abstain
Original better than Baseline	5	10	0
WGAA better than Baseline	15	0	0

- 12.2 The Working Group also voted on which of the Original or the WGAA's better meets the CUSC applicable objectives:

Voting Results	For
Original best	0
WGAA best	15

- 12.3 The Working Group recommends to the CUSC Panel that:

- A consultation report containing the CAP161 Original, WGAA1, WGAA2 and WGAA3 should proceed to wider Industry Consultation as soon as possible.
- The Working Group report is accepted by the CUSC Panel and the Working Group is disbanded once legal draft has been agreed.

13.0 NATIONAL GRID INITIAL VIEW

- 13.1 National Grid does not support implementation of the CAP163 original proposal due to the issues associated with unlimited sharing of access rights at a 1:1 exchange rate within pre-defined zones identified during the Working Group assessment.
- 13.2 The analysis work performed by National Grid demonstrates that the risk of increased socialised constraint costs is unacceptable and would not better facilitate the efficient discharge by the Licensee of the obligations imposed upon it by the act and the Transmission Licence, particularly the requirement to be economic and efficient. In addition, the original proposal would not better facilitate competition since it would expose users to significant socialised costs which they would not be in a position to control.
- 13.3 National Grid does support the implementation of the Working Group Alternative Amendment to introduce node to node sharing arrangements. This proposal introduces arrangements that, whilst not as flexible for users as those initially proposed, do provide practical means to share transmission access rights without the associated increase in socialised constraint costs.
- 13.4 The Working Group Alternative Amendment better facilitates the efficient discharge by the Licensee of the obligations imposed upon it by the Act and the Transmission Licence by allowing users at power stations with different operating regimes to share transmission access rights. These users will only apply for additional long-term access rights if sharing is not possible, and this would improve the signal provided to National Grid to invest in the transmission system leading to the development of a more economic and efficient transmission system. The Working Group Alternative Amendment better facilitates competition by providing alternative transmission access options for new entrants, and by potentially freeing long-term access rights for use by others if existing users choose to share and therefore optimise their long-term access rights holdings.

14.0 INDUSTRY VIEWS AND REPRESENTATIONS

13.1 Responses to the Working Group Consultation

- 13.1.1 The following table provides an overview of the representations received.

Copies of the representations are contained in Working Group Report Volume 2.

Reference	Company	Supportive
CAP163-WGC-01	Scottish Renewables	Partially
CAP163-WGC-02	Scottish Power	Supports prefers zonal
CAP163-WGC-03	Welsh Power	Implies support
CAP163-WGC-04	Scottish and Southern	Supports
CAP163-WGC-05	Gaz de France	Supports
CAP163-WGC-06	International Power	Support node to node
CAP163-WGC-07	E.On	Supports
CAP163-WGC-08	EdF Energy	WGAA better meets Objs – does not support original
CAP163-WGC-09	Dong Energy	Still considering
CAP163-WGC-10	BWEA	Same as Scottish Renewables
CAP163-WGC-11	British Energy	Support nodal sharing
CAP163-WGC-12	Renewable Energy Association	Supports original and AA
CAP163-WGC-13	Magnox	Supports
CAP163-WGC-14	Wind Energy	Strongly does not support
CAP163-WGC-15	ESB International	May provide incremental benefit
CAP163-WGC-16	RWE	Supports
CAP163-WGC-17	Centrica	Supports
CAP163-WGC-18	Immingham	Supports but has concerns
CAP163-WGC-19	Drax	Supports depending on final arrangements
CAP163-WGC-20	AEP	

13.1.2 There were no WG Consultation Requests received.

13.2 Views of Panel Members

13.3 Views of Core Industry Document Owners

13.3.1 National Grid has been in contact with the directly affected code owners discussed in this report. The most significant of these is the STC. A representative of the STC attended the Working Group as an observer and the STCC are progressing the necessary changes. Other code Panels received the Working Group reports and have made no representations to the Working Group Consultation.

ANNEX 1 – GLOSSARY AND ACRONYMS

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ANNEX 2 – PROPOSED LEGAL TEXT TO MODIFY THE CUSC

To be included in the final report to the Panel

Part A - Text to give effect to the Original Proposed Amendment

National Grid to request under CUSC 8.19.5 that this is not submitted.

Part B - Text to give effect to the Working Group Alternative Amendment

ANNEX 3 – WORKING GROUP TERMS OF REFERENCE AND MEMBERSHIP

Working Group Terms of Reference and Membership

TERMS OF REFERENCE FOR CAP161-164 WORKING GROUP 'ACCESS WORKING GROUP 1'

RESPONSIBILITIES

1. The Working Group is responsible for assisting the CUSC Amendments Panel in the evaluation of CUSC Amendment Proposals CAP161, 162, 163 and 164 tabled by National Grid at the Amendments Panel meeting on 25th April 2008.
2. The proposals must be evaluated to consider whether each of them better facilitates achievement of the applicable CUSC objectives. These can be summarised as follows:
 - (a) the efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence; and
 - (b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity.
3. It should be noted that additional provisions apply where it is proposed to modify the CUSC amendment provisions, and generally reference should be made to the Transmission Licence for the full definition of the term.

SCOPE OF WORK

4. The Working Group must consider the issues raised by the Amendment Proposals and consider if each of the proposals identified better facilitates achievement of the Applicable CUSC Objectives.
5. In addition to the overriding requirement of paragraph 4, the Working Group shall consider and report on the following specific issues:
 - Impact on bilateral agreements (BCA, BEGAs, CONSAG, Offers etc.)
 - Impact on core industry documents and other documents (incl. Transmission License)
 - Impact on computing systems, central and individual CUSC party
 - Application process and impact on bilateral agreements for short-term access
 - Implementation and transition requirements, including timescales
 - The impact on System Operator costs, internal and external
 - A cost benefit analysis, including market impacts and the cost of carbon⁵

⁵ Taken account of Ofgem guidance with respect to: <http://www.ofgem.gov.uk/Licensing/IndCodes/Governance/Documents1/Code%20objectives%20letter%20-%20final%20for%20external%20publication.pdf> (note link to CUSC WG established on carbon analysis)

- Efficient investment signals [generation, transmission & interconnectors]
 - Definitions, including the interaction with other codes and methodologies
 - Offshore arrangements
 - Applicability to embedded generation
 - Credit and security requirement implications
 - Impact on the demand (exit) arrangements
 - Overall revenue recovery (TNUoS, BSUoS and other charges)
 - Impact assessment on all users and licensees
 - The CUSC linkages to the charging methodologies
 - Impact of short term access on existing CUSC Parties long term rights
 - Impact on Security of Supply
 - Impact on Maintenance of the Reliability, Safety & Operation of the Grid
 - Limiting participation to physical players
- 5a. For CAP161, System Operator Release of Short-term Entry Rights, the working group shall also consider and report on the following specific issues:
- Impact on existing short term products, LDTEC and STTEC
 - The auction process
 - Temporal definition of the product(s)
 - Transparency of information required before and after auction
 - The process for recording contractual holding or access rights
 - The payment process [assuming pay as bid is not a charging issue]
 - Requirement for and implications of any restrictions to the product e.g. a buyback price cap
 - Ensuring that the arrangements do not unduly discriminate against any particular plant type or range of plant types
 - Consistency with European regulations
 - The need for a short term baseline for zonal release
 - Economic release criterion
 - Who should run the auction
- 5b. For CAP162, Entry Overrun, the working group shall also consider and report on the following specific issues:
- Local allocation and physical asset capability limits
 - Interaction with the provision of Balancing Services (including services such as frequency response, MaxGen Service and black start)
 - Settlement process, including resolution of settlement (e.g. half hour)
 - Lessons learnt from (and interaction with) cashout in the BSC
 - Ensuring that the arrangements do not unduly discriminate against any particular plant type or range of plant types
 - Additional information transparency
- 5c. For CAP163, Entry Capacity Sharing, the working group shall also consider and report on the following specific issues:
- The notification process
 - The transition arrangements for moving towards a sharing product
- 5d. For CAP164, Connect and Manage, the working group shall also consider and report on the following specific issues:
- The lead time for connection
 - Consider the transparency of bilateral changes to the connection date, including consideration of pre-defined circumstances by which this would be possible

- The appropriateness of the symmetry in rights and obligations
 - The transition arrangements for existing contracts
 - Interaction with other short term products
- 5e This working group shall have a sub group, to be known as “Access Working Group 3”. The Terms of Reference for Access Working Group 3 shall be agreed by the Amendments Panel and shall include the consideration of a number of enabling changes, principally:
- Zonal access rights
 - Local only applications
 - Zoning criteria
 - Local asset charging
 - Residual charging
 - Credit requirements for TNUoS charges based on a kWh element.
6. The Working Group is responsible for the formulation and evaluation of any Working Group Alternative Amendments (WGAAAs) arising from Group discussions which would, as compared with the Amendment Proposals, better facilitate achieving the applicable CUSC objectives in relation to the issue or defect identified.
7. The Working Group should become conversant with the definition of Working Group Alternative Amendments which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual Member of the Working Group to put forward a Working Group Alternative Amendment if the Member(s) genuinely believes the Alternative would better facilitate the achievement of the Applicable CUSC Objectives. The extent of the support for the Amendment Proposals or any Working Group Alternative Amendments arising from the Working Group’s discussions should be clearly described in the final Working Group Report to the CUSC Amendments Panel.
8. There is an obligation on the Working Group Members to propose the minimum number of Working Group Alternatives where possible.
9. All proposed Working Group Alternatives should include the proposer(s) details within the Final Working Group Report, for the avoidance of doubt this includes Alternative(s) which are proposed by the entire Working Group or subset of members.
10. There is an obligation on the Working group to undertake a period of Consultation in accordance with CUSC 8.17. The Working Group Consultation period shall be for a period of 4 weeks as determined by the Amendment Panel.
11. Following the Consultation period the Working Group is required to consider all responses including any WG Consultation requests. As appropriate the Working Group will be required to undertake any further analysis and update the Original and/or Working Group Alternatives. All responses including any WG Consultation Requests shall be included within the final report including a summary of the working Groups deliberations and conclusions

12. The Working Group is to submit their final report to the CUSC Panel Secretary on **17th July 2008** for circulation to Panel Members. The conclusions will be presented to the CUSC Panel meeting on **25 July 2008**.

MEMBERSHIP

13. It is recommended that the Working Group has the following members:

Chair	Hêdd Roberts (National Grid)
National Grid	Patrick Hynes (Proposer)
Industry Representatives	James Anderson
	Bob Brown
	Graeme Cooper
	Tony Dicicco
	Richard Ford
	Garth Graham
	Paul Jones
	Simon Lord
	Paul Mott
	Rekha Patel
	Rob Rome
	Tim Russell
	Helen Snodin
	Merel van der Neut Kolfshoten
	Barbara Vest
Authority Representative	David Hunt
Technical Secretary	Kathryn Sorrell
	Jeremy Caplin (Technical Advisor)
	STC (Technical Advisor)

NB: Working Group must comprise at least 5 Members (who may be Panel Members)

14. The Chair of the Working Group and the Chair of the CUSC Panel must agree a number that will be quorum for each Working Group meeting. The agreed figure for CAP161, 162, 163 and 164 is that at least 5 Working Group members must participate in a meeting for quorum to be met.
15. A vote is to take place by all eligible Working Group members (for the avoidance of doubt, that is (i) the Proposer (National Grid) and (ii) the Industry representatives listed above) on the proposal and each Working Group Alternative, as appropriate, as to whether it better facilitates the CUSC Applicable Objectives and indicate which option is considered the BEST with regard to the CUSC Applicable Objectives. Working Group Members will be given not less than five business days notice of the meeting at which the vote will take place. The results from the vote shall be recorded in the Working Group Report.
16. Working Group Members or their appointed alternate is required to attend a minimum of 50% of the Working Group Meetings to be eligible to participate in the Working Group vote.

17. The Technical Secretary to keep an Attendance Record, for the Working Group meetings and to circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the Final Working Report.
18. The membership can be amended from time to time by the CUSC Amendments Panel.
19. If any Working Group Member wishes to nominate an Alternate (to act on their behalf in their absence from meetings) then this should be sent to the Working Group Chair once the Working Group is under way who will confirm (to the Working Group Member) that the Alternate is duly designated. For the avoidance of doubt if the Working Group Chair believes the suggested Alternate does not have sufficient expertise in the issues being considered by the Working Group they will ask the Working Group Member to suggest a more suitable Alternate.
20. Observers may be permitted by the Chair to attend any meeting. It should be noted that the observer (i) will not have a vote and (ii) cannot speak unless asked to do so by the Chair. Any CUSC Party wishing to be an observer should agree with the Working Group Chair advance .The Chair may invite - +additional industry experts to any meeting as required to ensure efficient and comprehensive coverage of the agenda.

RELATIONSHIP WITH AMENDMENTS PANEL

21. The Working Group shall seek the views of the Amendments Panel before taking on any significant amount of work. In this event the Working Group Chair should contact the CUSC Panel Secretary.
22. The Working Group shall seek the Amendments Panel advice if a significant issue is raised during the Consultation process which would require a second period of Consultation in accordance with 8.17.17.
23. Where the Working Group requires instruction, clarification or guidance from the Amendments Panel, particularly in relation to their Scope of Work, the Working Group Chair should contact the CUSC Panel Secretary.
24. The working group shall maintain a register of assumptions and issues, which shall be published and reported to the Amendments Panel and other Transmission Access working groups on a regular basis.

MEETINGS

25. The Working Group shall, unless determined otherwise by the Amendments Panel, develop and adopt its own internal working procedures and provide a copy to the Panel Secretary for each of its Amendment Proposals.
26. To ensure an efficient process (and mindful of room logistics) only the Working Group Member or their appointed Alternate can attend a meeting. If an alternate wishes to attend the same meeting as their associated member this will be as an observer (under item 18. above) unless they have previously agreed with the Working Group Chair.

REPORTING

27. The Working Group Chair shall prepare final reports to the **25th July** Amendments Panel responding to the matter set out in the Terms of Reference.
28. A draft Working Group report will be produced individually for each of CAP161, 162, 163 and 164. Each draft working group report will include the relevant information from Access Working Group 3.
29. A draft Working Group Report must be circulated to Working Group members with not less than five business days given for comments.
30. Any unresolved comments within the Working Group must be reflected in the final Working Group Report.
31. The Working Group Chair (or another Working Group member nominated by him) will present the Working Group report to the Amendments Panel as required.

Sub-Group Terms of Reference and Membership

TERMS OF REFERENCE FOR SUB GROUP FOR CAP161-166 WORKING GROUPS, 'ACCESS WORKING GROUP 3'

RESPONSIBILITIES

1. The Sub-Group is responsible for assisting the two Working Groups established by the CUSC Amendments Panel for CAP161-66, which were tabled by National Grid at the Amendments Panel meeting on 25th April 2008.
2. The Sub-Group is established to evaluate the enabling elements of CAP161-166 and must be evaluated to consider whether the enabling elements better facilitate achievement of the applicable CUSC objectives. These can be summarised as follows:
 - (c) the efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence; and
 - (d) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity.
3. It should be noted that additional provisions apply where it is proposed to modify the CUSC amendment provisions, and generally reference should be made to the Transmission Licence for the full definition of the term.

SCOPE OF WORK

4. The Sub-Group must consider the enabling elements and issues raised by the Amendment Proposals and consider if the proposals identified better facilitate achievement of the Applicable CUSC Objectives.
5. In addition to the overriding requirement of paragraph 4, the Sub-Group shall consider and report to the Working Groups on the appropriateness, or otherwise of the following specific issues:
 - Application process for acquiring long and short-term access products.
 - Implications for moving from nodal access rights to zonal access rights.
 - Consideration of levels of security and credit requirements for commoditised residual generation tariff.
 - Impact on core industry documents.
 - Impact on IT systems.
 - Necessity for an impact assessment from a User perspective.
 - Impact on the transparency in the calculation of TNUoS tariffs and the User's ability to replicate these using the DCLF ICRP model.
 - Consideration of issues associated with SQSS.
 - Linkage with embedded generation.
 - Linkage with offshore transmission.

6. As a Sub-Group of the Working Groups for CAP161-166, the Group will where appropriate, provide input into the formulation and evaluation of any Working Group Alternative Amendments (WGAAs).
7. There is an obligation on the Working Group to undertake a period of Consultation in accordance with CUSC 8.17. The Working Group Consultation period shall be for a period of 4 weeks as determined by the Amendment Panel.
8. Following the Consultation period the Working Group is required to consider all responses including any WG Consultation requests. As appropriate the Working Group will be required to undertake any further analysis and update the Original and/or Working Group Alternatives. All responses including any WG Consultation Requests shall be included within the final report including a summary of the working Groups deliberations and conclusions.
9. The Sub-Group is to submit their final report to the Working Groups and the CUSC Panel Secretary on 17th July 2008 for circulation to Panel Members. The conclusions will be presented to the CUSC Panel meeting on 25 July 2008.

MEMBERSHIP

10. It is recommended that the Sub-Group has the following members:

Chair	Hêdd Roberts (National Grid)
National Grid Representative	Craig Maloney
Industry Representatives	Graeme Cooper
	Paul Jones
	Allan Kelly
	David Lewis
	Robert Longden
	Simon Lord
	Frank Prashad
	Louise Schmitz
	Nigel Scott / Helen Snodin
	Dennis Timmins
	Dave Wilkerson
	Barbara Vest
Technical Expert	Beehun Tan/ Qiong Zhou (Jo)
Authority Representative	Anthony Mungall
Technical Secretary	Tom Ireland (National Grid)

NB: The Sub-Group must comprise at least 5 Industry Representatives (who may be Panel Members)

11. The Chair of the Sub-Group and the Chair of the CUSC Panel must agree a number that will be quorum for each Sub-Group meeting. The agreed figure is that at least 5 Sub-Group members must participate in a meeting for quorum to be met.
12. The Technical Secretary to keep an Attendance Record, for the Sub-Group meetings and to circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the Final Sub-Group Report. The Chair will circulate the Working Group Report after each meeting.
13. The membership can be amended from time to time by the CUSC Amendments Panel.

RELATIONSHIP WITH AMENDMENTS PANEL

14. The Sub-Group shall seek the views of the Amendments Panel and Working Groups 1 and 2 before making a significant change to the scope of work. In this event the Sub-Group Chairman should contact the CUSC Panel Secretary.
15. The Working Group shall seek the Amendments Panel advice if a significant issue is raised during the Consultation process which would require a second period of consultation in accordance with 8.17.17.
16. Where the Sub-Group requires instruction, clarification or guidance from the Amendments Panel and Working Groups 1 and 2, particularly in relation to their Scope of Work, the Sub-Group Chairman should contact the CUSC Panel Secretary.

MEETINGS

17. The Sub-Group shall, unless determined otherwise by the Amendments Panel, develop and adopt its own internal working procedures and provide a copy to the Panel Secretary for each of its enabling elements of the Amendment Proposals.

REPORTING

18. The Sub-Group Chairman shall prepare a final report to the 25th July 2008 Amendments Panel responding to the matter set out in the Terms of Reference.
19. A draft Sub-Group Report must be circulated to Sub-Group members with not less than five business days given for comments.
20. Any unresolved comments within the Sub-Group must be reflected in the final Sub-Group Report.
21. The Chairman (or another member nominated by him) will present the Sub-Group report to the Amendments Panel as required.
22. An updated risk register will be published and discussed as a standing agenda item at each TCMF.

ANNEX 4 – WORKING GROUP ATTENDANCE REGISTER

Working Group 1 attendance:

Working Group members	13	28	10	23	8	18	6	20	3	10	19	23	5	12
	May		Jun		Jul		Aug		Sep		Oct		Nov	
James Anderson	✓	✓	✓	✓	6		✓	✓	✓	✓	✓	✓	✓	✓
Bob Brown	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓
Graeme Cooper		✓		✓	✓	✓					✓		✓	✓
Tony Diccio	✓	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Richard Ford	✓	✓	✓	✓	✓		✓		✓	✓			✓	
Garth Graham	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Paul Jones	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
Simon Lord	✓	2	✓	✓	✓	✓	✓	2	2	2	✓		2	✓
Paul Mott	✓		✓	✓	✓	✓	✓	8	✓	8	✓		✓	✓
Rekha Patel	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rob Rome	✓	✓	✓	✓	✓	✓	✓	✓		✓	9		9	✓
Tim Russell	✓	✓	✓	✓	7	✓		✓	✓	✓	✓	✓	✓	✓
Helen Snodin	✓	3	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Merel van der Neut Kolschoten	✓	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Barbara Vest	✓	✓	5	✓	✓	✓		✓	✓	✓	5	✓		
Patrick Hynes	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓
Hëdd Roberts (Chair)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kathryn Sorrell (Tec Sec)	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓

Invitees, alternates and observers	13	28	10	23	8	18	6	20	3	10	19	23	5	12
	May		Jun		Jul		Aug		Sep		Oct		Nov	
Jeremy Caplin (NG)	✓	✓	✓	✓			✓	✓	✓	✓	✓			
David Hunt (Ofgem)		✓	✓	✓	✓	✓	✓	✓			✓	✓		✓
Deborah MacPherson (STC)	✓	✓		✓	✓			✓	✓		✓	✓	✓	✓
Min Zhu (Ofgem)	✓								✓	✓				
Brian Taylor (NG)	✓													
Andy Rimmer		2						2	2	2			2	
Fiona Navesey		4												
Dennis Timmins		1												
Nigel Scott		3												
Ian Moss			5	✓	✓	✓	✓		✓		5			
Emma Luckhurst								8		8				
Stuart Cook (Ofgem)					✓									
Gerry Hoggan					6									
Paul Hurlock (National Grid)					✓	✓								
Gaynor H					7									
Ian Lomas (BERR)							✓							
Kevin Dibble								2						
Louise Schmitz											9		9	

Working group 3 register

Date	12-May	27-May	04-Jun	16-Jun	29-Jun	13-Jul	29-Jul	13-Aug	22-Aug	02-Sep	12-Sep	25-Sep	10-Nov
Meeting No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Allan Kelly	1	1	1	1	1	1		1	1				
Anthony Mungall	1	1		1		1		1					1
Barbara Vest	1				1	1	1	1				1	
Craig Maloney	1	1	1	1	1	1	1	1	1			1	
Dave Wilkerson	1	1	1	1	1	1	1					1	
Dennis Timmins	1		1	1	1	1	1			1		1	
Frank Prashad	1		1	1	1	1	1	1	1			1	
Hëdd Roberts	1	1	1	1	1	1	1	1	1			1	
Louise Schmitz	1	1	1	1	1	1	1	1	1			1	
Helen Snoddin (N Scott)	1	1	1	1	1	1	1	1	1			1	
Paul Jones	1	1	1	1	1		1	1	1			1	
Robert Longden	1	1		1		1	1	1	1			1	
Simon Lord	1			1	1	1	1					1	
David Lewis	1												
Bee Hun Tan				1	1	1	1	1	1			1	
Tom Ireland	1	1	1	1	1	1	1	1	1				1
Chris Barrass	1	1		1		1	1						
Qiong Zhou (Jo)	1	1		1	1	1	1	1	1				
Brian Taylor		1											
Michael Dodd			1		1		1		1			1	
Sebastian Eyre			1				1						
Emma Luckhurst			1		1	1	1				1	1	
Andrew Rimmer			1										
Dan Jerwood			1										
Stefan Leedham				1									
Stephan Curtis				1	1		1	1			1	1	1
Garth Graham					1								
Owen Wilkes					1								
David Walker							1						
Stuart Cotton							1	1	1				
James Anderson								1				1	
Stuart Cook							1				1		
David Scott													1

Cancelled

ANNEX 5 – AMENDMENT PROPOSAL FORM

CUSC Amendment Proposal Form	CAP: 163
Title of Amendment Proposal: Transmission Access – Entry Capacity Sharing	
<p>Description of the Proposed Amendment (<i>mandatory by proposer</i>):</p> <p>It is proposed to introduce a zonal access product, allowing Generators to connect without wider system access rights and facilitating intra zonal access sharing between Generators on a 1:1 basis.</p> <p>A local only application will allow users to become connected and begin to operate before any ‘wider’ reinforcement works are completed. The proposer suggests that ‘local’ works will be those that would facilitate the efficient exchange of entry rights between users within a zone on a 1:1 basis and facilitates users to gaining access to the wider system rights through other products (redistributed long-term rights or additional short-term rights). The assessment will consider the exact definition of ‘local’ works and highlight the pros and cons of the preferred definition. The charging arrangements associated with local works, which do not form part of the CUSC, will allow for efficient charging of variations arising from a generation User’s choice (design variations) and also ensure that users who share zonal rights, or use short-term rights to access the system, contribute proportionately to the additional in assets required.</p> <p>Zonal access rights will establish transmission access rights on a zonal rather than nodal level. This will be achieved by monitoring / settling access on a zonal company level. Therefore zonal access rights will implicitly introduce intra zonal access sharing on a 1:1 basis for an individual user. Entry capacity sharing will also extend this concept of sharing to multiple users. It is envisaged that a new Zonal Definition Methodology would establish and govern the definition of the zones. These zones would be applicable across all zonal products and associated charges. Moving to a zonal rather than nodal access regime has the potential to create additional constraints; the analysis in the assessment phase will seek to quantify this.</p> <p>The process for notifying National Grid of Entry Capacity sharing arrangements between users will be developed during the amendment assessment stage. There are a number of possible models, such as: codifying the sharing through a new CUSC form (ex ante); notifying explicit transfer of rights ex ante; or ex post notification of transferred access rights.</p> <p>Transition arrangements from the current Transmission Entry Capacity, TEC, will be considered in the amendment assessment stage.</p>	
<p>Description of Issue or Defect that Proposed Amendment seeks to Address (<i>mandatory by proposer</i>):</p> <p>The current arrangements for transferring entry access rights between CUSC parties are relatively restrictive and cumbersome, limiting the ability of users to maximise the efficient use of the system in real time and restricting the efficient operation of the energy market.</p> <p>In addition, under the current arrangements, users who release long-term entry rights are committing not to export. This can lead to potential overbooking of long-term rights, delayed connection and a reliance on administered rules for determining the appropriate level of sharing of transmission capacity between users.</p> <p>Furthermore, the current arrangements do not recognise the future need for more dynamic sharing between users created by the forecast higher plant margins and increases in the levels of intermittent generation.</p>	

Impact on the CUSC *(this should be given where possible):*

This amendment will most likely require amendment to Sections: 6 (General Provisions) and Section 11 (Interpretation and Definition) of the CUSC. There will also be changes to Section 2 (Connection), Section 3 (Use of System), Section 4 (Balancing Services) and Section 9 (Interconnectors).

There are also expected to be changes required to the existing bilateral agreements held by generators that constrain access rights (Bilateral Connection Agreement and Bilateral Embedded Generation Agreement). Consistent with this, there are also likely to be changes to the existing exhibits and schedules to the CUSC and possibly the need to introduce additional exhibits and schedules.

Impact on Core Industry Documentation *(this should be given where possible):*

To be identified during assessment.

Impact on Computer Systems and Processes used by CUSC Parties *(this should be given where possible):*

Depending on the model adopted by the working group there may be systems required to facilitate the notification of sharing arrangements. It is envisaged these may work right up to real time and possibly after the event and therefore would be considered 'operational'.

The submitted sharing information will need to interact with existing and new short term charging and monitoring systems. There would be an interaction with any IS requirements for 'overrun' charging.

Details of any Related Modifications to Other Industry Codes *(where known):*

The charging methodologies, to develop charging arrangements that charge local applications only consistent with the charging objectives in the electricity transmission licence.

The Security and Quality Supply Standard, to be reviewed to consider the implications for design of the GB transmission system where zonal sharing takes place.

Justification for Proposed Amendment with Reference to Applicable CUSC Objectives** *(mandatory by proposer):*

The proposed amendment would better facilitate the achievement of Applicable CUSC Objectives (a) the efficient discharge by the licensee of the obligations imposed upon it under the Acts and by the licence; and (b) facilitating effective competition in generation, by:

- Promoting the more efficient use of the transmission system through allowing parties to connect in advance of wider transmission works.
- Improving the signals for design of the transmission system through creating an alternative to firm long-term access products priced to reflect asset costs. This would particularly be the case against the forecast increase in plant margins and forecast increase in the use of generation from intermittent sources. This may suit a range of plant types.
- Providing for the release of long-term entry access rights from existing plant thus facilitating early entry in to the market for new plant.

Details of Proposer: Organisation's Name:	National Grid
Capacity in which the Amendment is being proposed: (i.e. CUSC Party, BSC Party or "energywatch")	CUSC Party
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	Patrick Hynes National Grid 01926656319 patrick.hynes@uk.ngrid.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Duncan Burt National Grid 01926656703 duncan.burt@uk.ngrid.com
Attachments (Yes/No): No If Yes, Title and No. of pages of each Attachment:	

Notes:

1. Those wishing to propose an Amendment to the CUSC should do so by filling in this "Amendment Proposal Form" that is based on the provisions contained in Section 8.15 of the CUSC. The form seeks to ascertain details about the Amendment Proposal so that the Amendments Panel can determine more clearly whether the proposal should be considered by a Working Group or go straight to wider National Grid Consultation.
2. The Panel Secretary will check that the form has been completed, in accordance with the requirements of the CUSC, prior to submitting it to the Panel. If the Panel Secretary accepts the Amendment Proposal form as complete, then he will write back to the Proposer informing him of the reference number for the Amendment Proposal and the date on which the Proposal will be considered by the Panel. If, in the opinion of the Panel Secretary, the form fails to provide the information required in the CUSC, then he may reject the Proposal. The Panel Secretary will inform the Proposer of the rejection and report the matter to the Panel at their next meeting. The Panel can reverse the Panel Secretary's decision and if this happens the Panel Secretary will inform the Proposer.

The completed form should be returned to:

Beverley Viney
Panel Secretary
Commercial Frameworks
National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Or via e-mail to: Beverley.Viney@uk.ngrid.com

(Participants submitting this form by email will need to send a statement to the effect that the proposer acknowledges that on acceptance of the proposal for consideration by the Amendments Panel, a proposer which is not a CUSC Party shall grant a licence in accordance with Paragraph 8.15.7 of the CUSC. A Proposer that is a CUSC Party shall be deemed to have granted this Licence).

3. Applicable CUSC Objectives** - These are defined within the National Grid Electricity Transmission plc Licence under Section C7F, paragraph 15. Reference should be made to this section when considering a proposed amendment.