**Transmission Access Review**
**Guidance note to accompany CUSC Working Group Consultations**

## Introduction

1. On 18 March 2008, National Grid hosted a seminar to discuss the industry response to the Transmission Access Review process being led by Ofgem and BERR. At this seminar, National Grid proposed that existing industry governance arrangements may provide the timeliest means of implementing the findings of the review.

2. In order to facilitate detailed industry development and assessment of the models of transmission access reform described by Ofgem and BERR, National Grid proposed a suite of Connection and Use of System Code (CUSC) amendment proposals and Transmission Network Use of System (TNUoS) charging methodology modifications. These proposals were discussed further at an industry workshop held on 10 April 2008.

3. The CUSC amendment proposals were considered by the CUSC Amendment Panel meeting held on 25 April 2008. The Panel agreed that these proposals should be divided into three working groups to consider short-term access, long-term access and supporting changes.

4. National Grid was also concerned about the importance of the interaction between the access changes (discussed under the CUSC) and the associated charging changes (discussed under the Transmission Charging Methodologies Forum, TCMF). In order to address concerns about this interaction, National Grid proposed that the three working groups described above would discuss CUSC, charging and any other issues. The content of the working group discussions would then be used to produce CUSC Working Group reports, Charging Methodology Pre-consultation documents and drafts of any other methodology documents that may be required.

5. The Working Groups held a series of meetings between May and September 2008 to develop and assess the modifications and on 3 October 2008, the following CUSC Working Group consultations were published:
    - CAP161: System Operator (SO) release of short-term access rights;
    - CAP162: Entry overrun;
    - CAP163: Entry capacity sharing;
    - CAP164: Connect and manage;
    - CAP165: Finite long-term entry rights;

    The final Consultation, for CAP166 (Entry capacity auctions), is currently due to be published on 17 October 2008.

6. This document describes the original models of access reform and how these were constructed with different combinations of the individual CUSC amendment proposals and charging modifications.

## Models of access reform

7. The suite of CUSC amendment proposals and charging modifications is shown in figure 1 below.

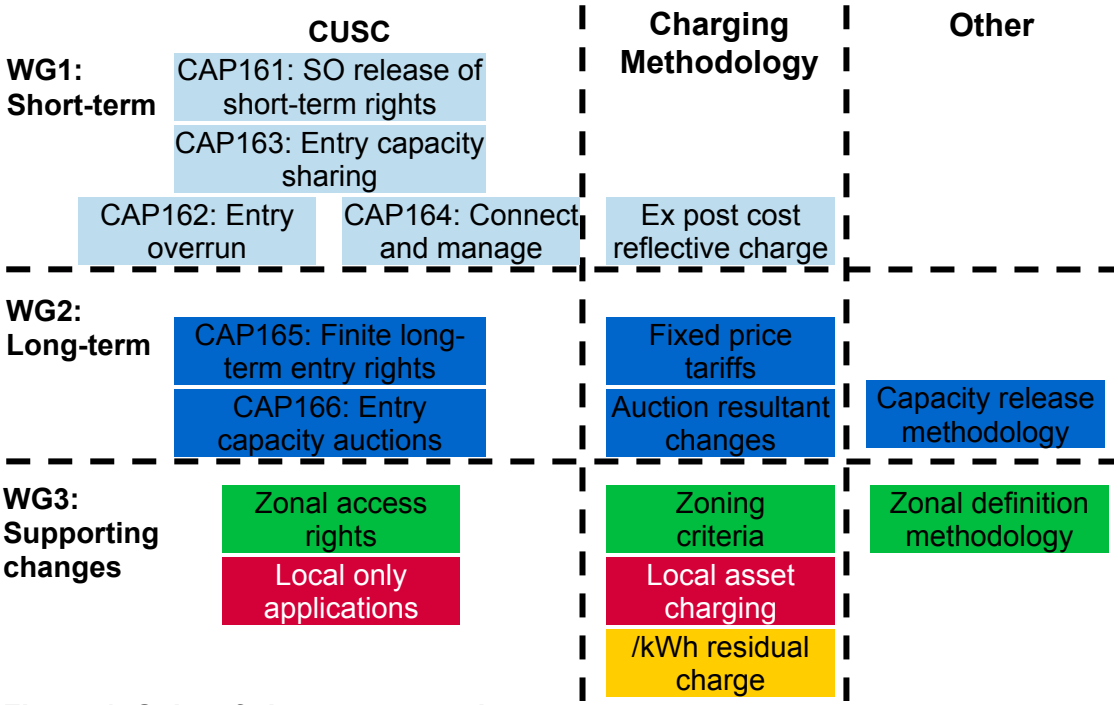


**Figure 1: Suite of change proposals**

8. This suite of change proposals was originally derived as a means of building the following competing models of access reform:
    - Connect & manage;
    - Evolutionary change;
    - Capacity auctions.

**Connect & manage**

9. The original connect & manage access model is summarised in the table below.

| | |
|---|---|
| Access allocation | • Allocate then invest for long-term rights when accompanied by suitable long-term commitment<br>• Eligibility criteria must be met (e.g. [3] years after connection offer accepted; local works complete) |
| Secondary trading | • No secondary trading |
| Nature of rights | • Nodal long-term rights |
| Pricing | • Full TNUoS “local”, “wider” and “residual” |

10. It was envisaged that the connect & manage access model could be implemented with the approval of CAP164 (including a definition of local works) and the charging methodology modification associated with assets local to generation connections as shown in figure 2 below.

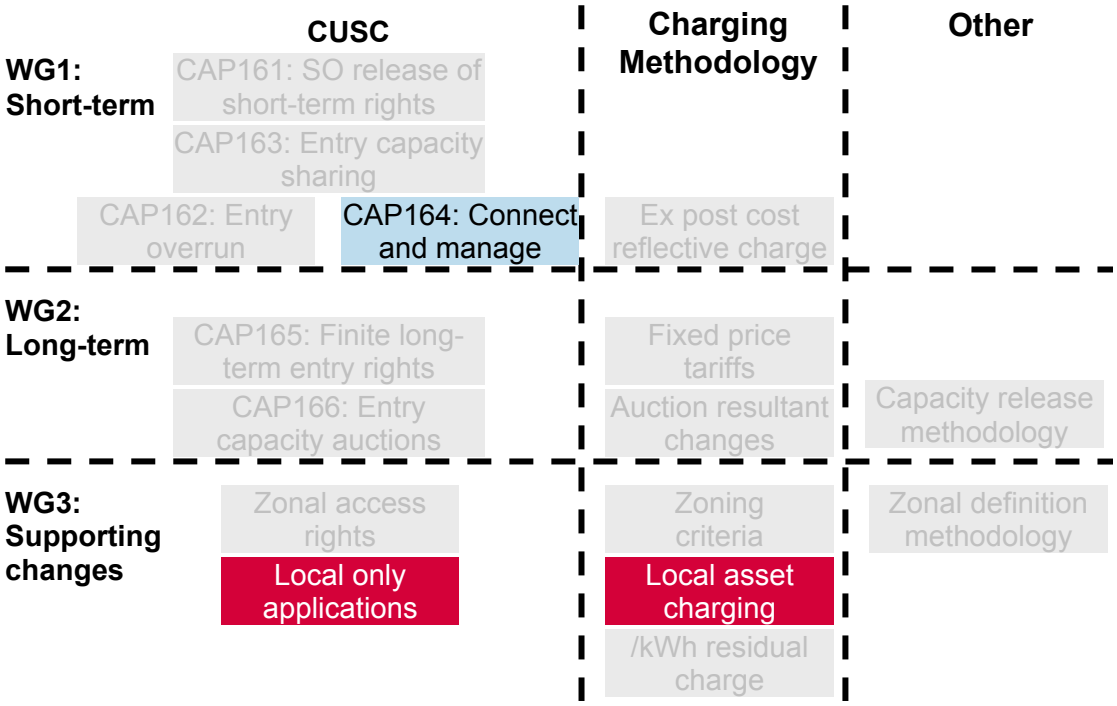


**Figure 2: Implementation of connect & manage**

11. The CAP164 proposals were developed based upon those made under CAP148, but without limiting use to renewable generation only. Under the proposed arrangements, once the "local" works have been completed as specified in response to a generators local only application, firm transmission access rights would be awarded. The expected additional operational costs that would result from the connection and manage regime would be socialised across all generation and demand Users. Assuming the local connection is completed, a connecting generator would be obliged to pay TNUoS charges from its connection date, regardless of whether the unit is fully operational. The Transmission Owner has a maximum lead time in which to complete the Local Connection Works of X years, where X is 3 or 4 years.

12. Although it was not the original intention for CAP164 and CAP165 to be simultaneously implemented, the opinion of the industry expressed at the TAR Coordination meeting held on the 15th September 2008, was that such a combination would be viable.

13. A Conclusions Report was submitted to the Authority for Local Asset Charging on 15th October 2008.

**Evolutionary change**

14. The original evolutionary change access model is summarised in the table below.

| | |
|---|---|
| Access allocation | • Invest then allocate for long-term rights when accompanied by suitable long-term commitment<br>• Short-term rights identified and auctioned by SO<br>• Overrun |
| Secondary trading | • Sharing allowed in pre-defined zones with 1:1 sharing factor |
| Nature of rights | • Zonal short or long-term rights for a defined period |
| Pricing | • Residual (£/kWh) and local asset charge LRMC for long-term<br>• "Pay as bid" for SO released; ex post SRMC for overrun |

15. It was envisaged that the evolutionary change access model could be implemented with the approval of CAP161, CAP162, CAP163 and CAP165 (including a definition of suitable zones and local works) and the charging methodology modifications associated with assets local to generation connections, the residual element of TNUoS and generation zoning criteria as shown in figure 3 below.

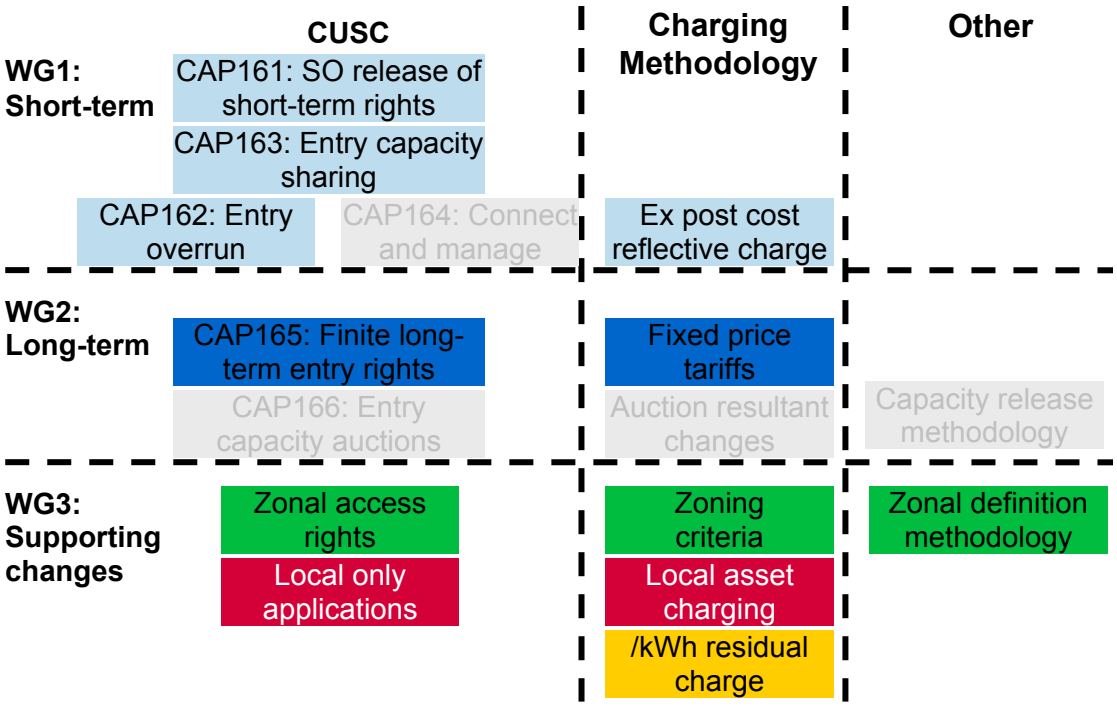


**Figure 3: Implementation of evolutionary change**

16. Under CAP161 Users are able to bid for short-term capacity. The SO assesses submitted bids in the order of highest price bids first and grants access when the price of the bid is greater than the estimated risk of constraint costs. The original proposal involved a 5 week ahead auction for weekly blocks of zonal or nodal capacity and a 2 day ahead auction for daily blocks of capacity. A WGAA has been proposed for the first come, first served assignment of capacity up to 1 year

ahead with an obligation for the generator to pay the SO's estimate of the costs of providing this capacity.

17. Entry Overrun under CAP162 can be on a nodal or zonal basis and three pricing options have been considered; (i) Simple, where the price is a multiple of the Balancing Services Use of System charge less the Residual Cashflow Reallocation Cashflow; (ii) Average pricing, a subjective degut of ex post SO costs (iii) Marginal pricing, requiring a model to calculate prices from SO identified costs. The implementation of both the Simple and Average models carry a medium/ low delivery timescale risk whereas the marginal model has a high risk suggesting implementation is unlikely for April 2010.

18. Under CAP165, post-commissioning generators would have temporally defined finite long-term entry rights, underpinned by a commitment to pay TNUoS charges for the duration of this access booking. That is to say that each User's rights would have an end-date, after which such rights would be available to be reallocated to new entrants. Pre-commissioning generators would provide user commitment based on booking a minimum period of 8 years of access. A WGAA differs in that pre-commissioning user commitment would be given through a system of fixed final sums. Another WGAA proposes a rolling 4 year commitment period for post-commissioning generators.

19. The development of the proposed zoning criteria concluded that an approach that aims to limit potential increases in SO costs, leads to small zones severely limiting the effectiveness of transmission access trading and the number of parties that can exchange access. Conversely, methodologies that form large trading zones result in a significant risk of greatly increased SO costs. The remaining options being considered are to either to apply large trading zones with the implementation of a headroom limit for zonal trading or a WGAA which would implement fixed exchange rate node to node trading between two nodes for a known volume and duration. Under CAP163, the codified notification process for both the original and the WGAA have been agreed and the zonal vs. nodal decision is to be based upon cost benefit analysis.

20. Three suitable options have been developed in order to recover the TNUoS residual; (i) **Commoditisation**: whereby the residual element of the TNUoS generation tariff is levied on Users of all long and short-term access products proposed by the suite of CUSC Amendments on a half-hourly metered generation basis (£/MWh) for every settlement period throughout the charging year; (ii) **Local Capacity Nomination**: whereby the residual element of the TNUoS generation tariff is levied on Users for all long and short-term access products based on their 'Local Capacity Nomination' (£/MW); (iii) **Daily Peak Generation**: whereby the residual element of the TNUoS generation tariff is calculated based on the metered generation for the period 16:00 hrs to 19:00 hrs inclusive (i.e. settlement periods 33 to 38) every day over the charging year (£/MWh).

**Capacity auctions**

21. The original capacity auction access model is summarised in the table below. This model is essentially based on the evolutionary change model with the addition of an auction for long-term access rights, and therefore the factors that differentiate this model from evolutionary change have been highlighted in yellow below.

| | |
|---|---|
| Access allocation | • Long-term rights (invest then allocate) auctioned<br>• Suitable long-term commit required for incremental capacity<br>• Short-term rights identified and auctioned by SO<br>• Overrun |
| Secondary trading | • Sharing allowed in pre-defined zones with 1:1 sharing factor |
| Nature of rights | • Zonal short or long-term rights for a defined period |
| Pricing | • Residual (£/kW) and local asset charge<br>• "Pay as bid" for long-term<br>• "Pay as bid" for SO released; ex post SRMC for<br>• Overrun |

22. It was envisaged that the capacity auction access model could be implemented with the approval of CAP161, CAP162, CAP163 and CAP166 (including a definition of suitable zones and local works) and the charging methodology modifications associated with assets local to generation connections, the residual element of TNUoS and generation zoning criteria as shown in figure 4 below.

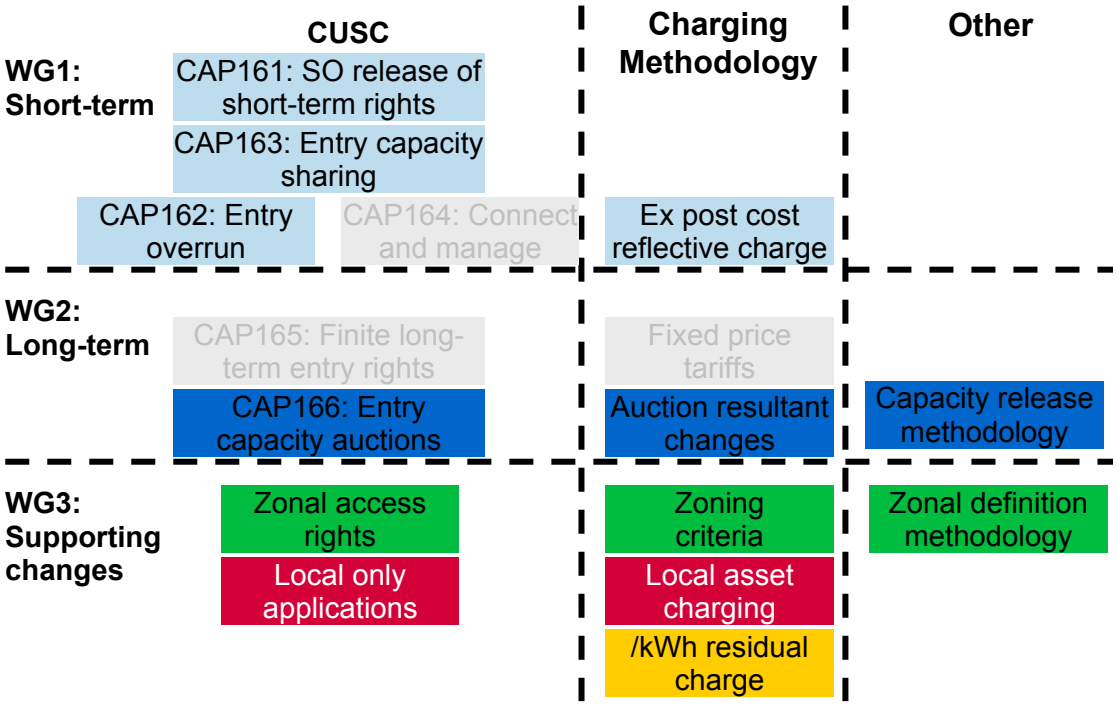


**Figure 4: Implementation of capacity auctions**

23. Under CAP166 the original amendment proposed that capacity be auctioned zonally, with the available zonal capacity being calculated ex ante. A WGAA has been developed where nodal capacity is allocated by an optimisation which seeks to maximise the net of bid revenue and reinforcement costs whilst honouring boundary (or circuit) capabilities. A further WGAA features Users specifying the required duration and volume, and being offered a price by the SO.

**Next steps**

24. National Grid anticipates publishing the associated charging pre-consultations as soon as practical, with a backstop of 17th October 2008, so as to allow for their simultaneous consideration with the CUSC Working Group Consultations.

25. After the Working Group Consultations are completed, Working Group Reports will be submitted to the CUSC Panel in mid-November. This will be followed by CUSC Company Consultations for a period of two weeks.