Transmission Access Review

August 2008 Progress Report

Working Group 1 – Short-term access[1]

The working group is currently 'on target' against the work plan, although progress with entry capacity sharing has not met expectations due to the issues with allowing sharing within pre-defined zones identified by working group 3.

- **Overrun pricing**
  The group has developed three models for pricing generation which is above aggregate long and short term access right holdings:
  - Simple multiplier
    The sub-group has investigated a number of options and concluded that charging users based on a function of [BSUoS – RCRC] gives the best correlation between charges and constraint costs.
    Analysis is being performed to investigate whether a zonal weighting can also be applied.
  - Average cost (ex post average price based on SO degut of balancing costs)
    The working group has noted that this approach seeks to hold users with transmission access rights whole by recovering any addition costs caused by overrun directly from the parties that are overrunning.
    The sub-group has developed a methodology for allocation.
    For practical reasons, the original methodology developed did not include negative overrun prices. A methodology which includes negative prices is being investigated.
  - Marginal cost (ex post marginal price based on optimisation)
    The working group has noted that this approach seeks to provide an appropriate signal for use of the existing transmission assets, and a level playing field between the pricing of long and short term access.
    A simple network model has been developed to illustrate how marginal prices would be calculated. The SO identifies system constraints and an optimisation is performed to minimise system balancing costs subject to these constraints. The nodal shadow costs can be derived from this calculation.

  Further work is required to assess the models against the relevant charging objectives.
- **SO release of short-term access rights**
  The group has developed three models for the SO release of short-term access rights.
  - An auction for a weekly block of capacity held five weeks ahead
  - An auction for a daily block of capacity held two days ahead
  - A first come, first served approach for blocks of capacity in the current year [similar to the existing approach for the release of LDTEC] with a cost reflective price determined by the SO

  Further work is required to compare the allocation options that have been developed and assess them against the applicable CUSC objectives.

[1] http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/workingstandinggroups/wg161-164/

- **Entry capacity sharing**
  The working group has discussed the following notification options for sharing within pre-defined zones:
    - Codified
      Sharing arrangements would be codified in bilateral agreements ex ante.
    - Ex ante notification
      A notification system is required to allow users to notify the SO of sharing arrangements closer to real time.
    - Ex post notification
      A notification system is required to allow users to notify the SO of sharing arrangements after real time.

  The working group expressed concerns about the prospect of entry capacity sharing being approved without overrun. In this scenario, one user could cause another user to be in breach of the CUSC by not adhering to a bilateral sharing arrangement. Alternative remedies to 'breach of CUSC' for these situations are being explored.
  Further information about the feasibility of sharing within pre-defined zones (see WG3 below) is required to allow these options to be further developed and assessed.
- **Connect & manage**
  The working group has developed a Connect & Manage model based on that developed by the CAP148 working group, but without limiting participation to renewable generators only.
  Users would obtain access to the wider transmission system following a pre-defined maximum lead time, provided 'local' works are complete and the users are prepared to meet the user commitment requirements.
  A number of options for the appropriate maximum lead time have been discussed (3, 4 and 5 years).
  Detailed cost-benefit analysis (including carbon abatement) is currently being carried out to support assessment against the applicable CUSC objectives.

Working Group 2 – Long-term access[2]

The working group is currently 'on target' against the work plan for finite entry rights, but 'behind schedule' on long-term capacity auctions. The working group is exploring all options to ensure the auctions work is delivered in the necessary timescales.

- **Finite entry rights**
  The group has discussed a number of developments to the original proposal. The original intention was that liabilities for pre-commissioning and post-commissioning users would be based on a number of years of TNUoS charge. Further analysis has indicated that this may not be appropriate in all zones and alternatives (e.g. Zonal Unit Cost Allowances from the Price Control Review Final Proposals) are being investigated.
  The working group is also investigating the appropriate level of security provision from users that pose a credit risk.
  National Grid, as proposer, is developing this approach following feedback at the latest working group meeting.

[2] http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/workingstandinggroups/wg165-166/

An alternative proposal has also been raised and discussed with the working group. Under this proposal, the notice of closure period would increase to a period which represents a balance between that required by the transmission companies to plan reinforcements and that which the generators are in a position to provide.

- **Capacity auctions**
  The group has developed two straw men:
  - Auction for zonal capacity
    The SO would identify a number of zones and the associated capacity baselines. Users would bid for zonal capacity for the years required in an open, ascending, multi-round auction with TNUoS used to calculate zonal reserve prices. Users that are successful would pay a cleared price. Initially, there would be no arrangements to deal with the interactions between zones.
  - Simultaneously cleared auction for zonal (or nodal) capacity
    The SO would identify boundary capabilities and the impact that individual generators would have on these boundaries. For future years, the costs and constraints on system expansion would also be modelled. Users would bid for capacity in the years required on an open, multi-round, ascending, pay-as-bid auction. Access would be allocated by an optimisation algorithm subject to the system constraints identified.

  Further work is required to resolve significant issues identified with each of the straw men.

Working Group 3 – Enabling changes[3]

The working group is currently 'on target' against the work plan for local capacity nomination, local charging and the treatment of the residual charge, but 'behind schedule' on the zoning methodology. The working group is exploring all options to ensure the zoning work is delivered within the necessary timescales. This includes exploring alternative options for node-to-node sharing.

- **Local charging arrangements**
  National Grid has published a consultation on the appropriate charging arrangements for assets local to generation connections. The consultation proposed two options:
  - Specific treatment of assets local to generation connections:
    A deterministic definition of a Main Interconnected Transmission System (MITS) substation is proposed. Users would pay a local charge for the proportion of assets between their entry point and the nearest MITS substation that they use.
  - Specific treatment of distance to zonal hub:
    A zonal hub is defined, with MWkm between generator terminals and zonal hub defined as local and MWkm between zonal and market hubs treated as wider.

  The consultation also proposed that a signal of substation costs should be introduced.
  The consultation closed on Friday 29 August 2008.

[3] http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/workingstandinggroups/wg161-166/

- **Local Capacity Nomination**
  The working group have discussed the concept of a Local Capacity Nomination (LCN). Users would use this to indicate the extent of local works required to connect them to the transmission system. The transmission access rights that the user then purchases (including overrun) would be limited by the notified LCN.
  The GBSO would use the LCN as the basis of chargeable volume for local charges (see above).
  The working group has discussed scenarios in which users may wish to share a LCN, and the arrangements to deal with this are being developed.
  The working group has discussed application processes for LCN, for both transitional arrangements and applications for increases / decreases in LCN on an enduring basis.

- **Treatment of the residual element of the TNUoS generation charge**
  The working group has agreed that long term and short term access users should contribute to the residual element of the TNUoS generation charge. The working group have discussed the following options to achieve this:
    - Charge residual element on utilisation (£/kWh)
    - Charge residual element on LCN (£/kW)
    - Charge residual element based on utilisation over daily peak (£/kWh between 4pm and 7pm, Settlement Periods 33 to 38)

  Further work is required to assess these options against the relevant charging objectives. A pre-consultation is expected to be published for industry comment in September.

- **Zoning methodology**
  The detailed transmission system analysis that has been carried out has illustrated that the risks associated with unlimited sharing within pre-defined zones are significant.
  The following options are being explored:
    - Small zones (in some cases nodes) to manage risks
    - Larger zones:
      Cost benefit analysis is being performed to assess the impact of accepting larger zones.
      The results of this analysis will also be used to investigate options to manage adverse consequences (e.g. limit maximum capacity sharable by zone or limit duration of sharing arrangement).
    - Node to node sharing arrangements:
      The following options are being explored to facilitate sharing between nominated nodes:
        - Exchange rate based on ratio of (ex post) overrun prices
          This option is reliant on the approval of the overrun proposals. An exchange rate calculated in this way would ensure that users with long-term rights get the full time-varying value of these rights at the nodes they are effectively donating to.
        - Fixed point to point exchange rate calculated by the SO based on a specified duration and volume
        - Point to point access right provided in transmission investment timescales.

      These options will need to be considered further by working group 1.

Timescales

The provisional CUSC milestone dates for the transmission access proposals are listed below for information.

- Working Group Consultation
    - Published: w/c 22 September 2008
    - Closes: w/c 20 October 2008
- Working Group Final Report
    - Extraordinary CUSC Panel meeting: [14] November 2008
- National Grid consultation
    - Published w/c 24 November 2008
- Amendment Report
    - Submit to CUSC Panel: 11 December 2008
    - CUSC Panel vote: 19 December 2008