IU Long-Term Cross-Zonal Capacity Calculation Methodology

Explanatory Memorandum

Overview

Commission Regulation (EU) 2016/1719, also known as the Forward Capacity Allocation Regulation, requires TSOs in each capacity region to develop a methodology to deal with the calculation of long-term cross-zonal capacity on interconnectors in the region. This is the proposed methodology for the Ireland-UK (IU) region and is similar to the high-level framework developed for the Channel region.

The methodology addresses capacity in terms of calendar years throughout.

Title 1 – General provisions

This section outlines definitions and general principles for the methodology.

It defines “Firm Connection Capacity” (FCC), which is the firm capacity of an interconnector taking into account restrictions applied by onshore TSOs below the technical capacity of the respective interconnector in its relevant connection agreements.

This section also defines Critical Network Element and Contingencies (CNECs) in accordance with the definition in the IU regional capacity calculation methodology established for the day-ahead and intraday timeframes.

Title 2 – Long-term cross-zonal capacity calculation

Initial allocation

The methodology releases long-term capacity in ‘tranches’ throughout the calendar year preceding the delivery calendar year (i.e. in Y-1) to interconnector owners. The first tranche is released in July Y-1.

Each tranche allocates a certain percentage of Firm Connection Capacity. The percentage released in the initial July allocation is by default 50%, however this default value can be increased should all TSOs in the region agree to such an increase.

The process by which any percentage increase happens is for all TSOs to individually submit the maximum percentage they are comfortable allocating to the capacity calculator (envisaged to eventually be Coreso), who will then take the minimum value that has been submitted as the value to be allocated.

This initial tranche is subject to reductions from the 50% (or whatever percentage has been agreed) where the historic day-ahead capacity in each direction on the relevant interconnector has often been below 50% of the FCC. This is calculated using the following statistical methodology.

The capacity calculator will rank all the historic day-ahead NTCs as a proportion of the FCC on that day for the two calendar years preceding Y-1 from largest to smallest. This is represented by the blue line in Figure 1. They will then establish the 90th percentile value in this set. In this case this would represent 99% of FCC (the orange line).

The capacity calculator will then compare this value against the agreed 50% or higher of FCC from the first stage. In this case, the grey line represents 50%.

Where the historic value exceeds 50% of FCC, as in this example, the amount available for allocation in July Y-1 will be 50% of FCC. In contrast, if the historic value was lower than 50% of FCC, then the historic value would be the amount available for allocation at this stage.

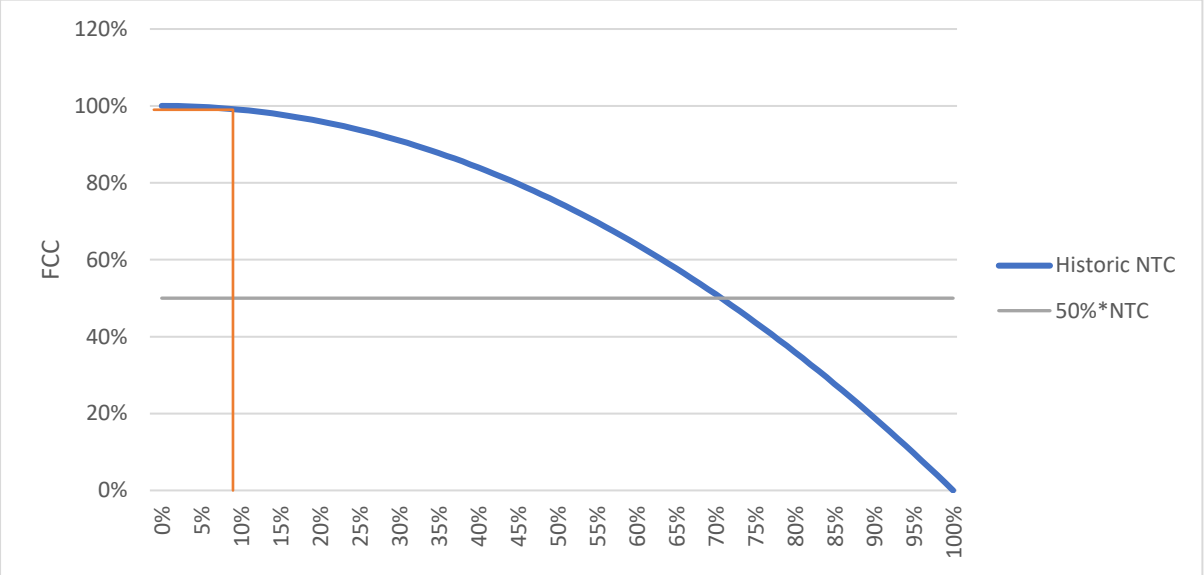

Figure 1

In contrast, in Figure 2 the historic 90th percentile value in the set is actually only 30% of FCC. As this is below 50%, only 30% of FCC would be released for allocation at the July Y-1 stage.

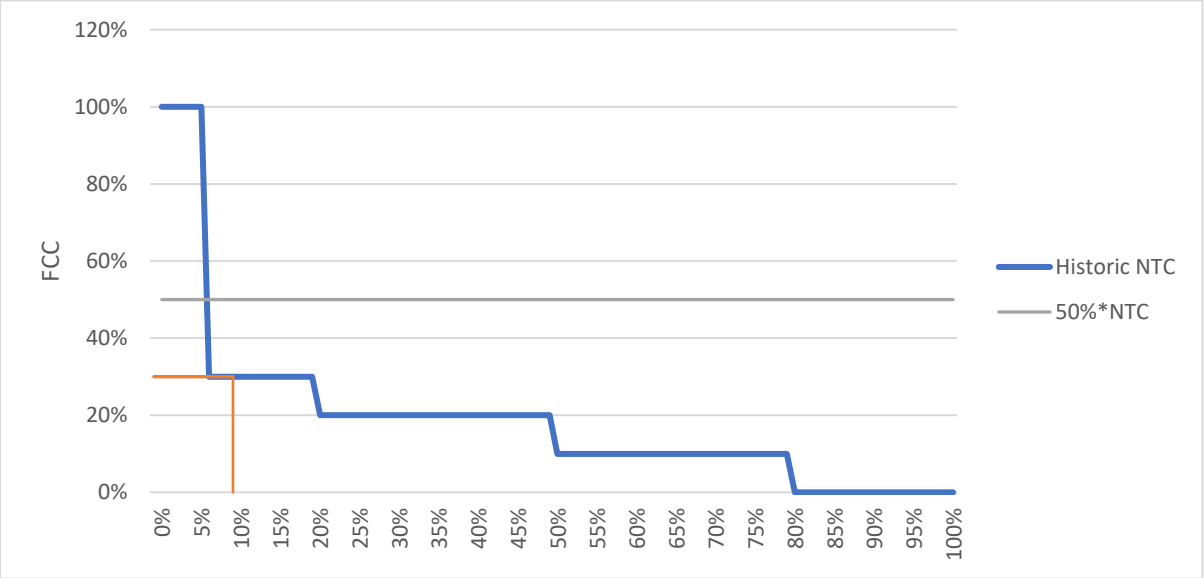

Figure 2

Where a planned outage on either the interconnector or a relevant CNEC is known about in advance of the July Y-1 capacity release, this will be taken into account and, where there is a planned outage on a relevant CNEC, a scenario-based calculation will be carried out.

This scenario-based allocation for periods with a known outage will seek to establish whether the outage will have an effect on cross-zonal capacity and consider if there are remedial actions etc. that could be used to mitigate the impact on CZC. Having considered this, it will calculate the maximum amount of cross-zonal capacity that could be released given these outage conditions whilst maintaining system security. Where this value is lower than the

historic value of 50% of FCC, this will be incorporated as reduction periods in any allocation of long-term capacity.

Mid-year scenario-based calculation

In September Y-1, there is a first scenario-based calculation to release additional capacity. At this stage at least 90% of FCC is released (not including periods with a known outage on an interconnector or relevant CNEC), although this can be higher if either all TSOs agree using a similar process to the one used in the initial allocation, or if more than 90% was allocated in the initial July allocation.

The capacity released at this stage is firm for periods up to and including 31st March in year Y. No additional capacity beyond that released in July Y-1 for April onwards in year Y will be available for allocation as long-term transmission rights at this stage.

The scenario-based approach is modelled on the approach taken in the IU regional capacity calculation methodology established for the day-ahead and intraday timeframes, and it is envisaged that Coreso will eventually fulfil the capacity calculator role.

The 90% firm release value at this stage reflects the fact that, as it gets closer to December, TSOs will have better quality input data available for the calculation, as there is less time for outage plans to change, and they are likely to become firmer closer to real time. As outages on CNECs will affect cross-zonal capacity, they are also notifiable under REMIT. This means that TSOs will have up to date outage information for relevant parts of the transmission grid in September.

Final scenario-based calculation

In December Y-1, the full FCC, taking into account known outages on interconnectors and relevant CNECs, is made available through a final scenario-based analysis, using the same process as the calculation conducted in September. At this point all outages are finalised and not subject to change by transmission owners, so the calculation will be using the best possible input data.

Title 3 – Compensation

Should previously allocated firm capacity need to be reduced in a subsequent phase of the capacity allocation process, the TSOs responsible for the subsequent reduction must compensate the impacted interconnector owner(s) if the interconnector owners have already allocated that capacity as transmission rights.

This compensation due to interconnector owners will be equal to the costs to them of compensating the holders of already allocated transmission rights on their interconnector(s).

This compensation mechanism ensures holders of allocated FTRs are compensated in line with the Harmonised Allocation rules, using a ‘causer pays’ principle.

The Day-Ahead and Intraday Capacity Calculation methodology for the IU region, as required by CACM, also assumes that interconnector owners will be compensated for capacity reductions but does not consider the detail of such compensation. It is the IU TSOs’ intention that there will be no duplication of compensation i.e. of an interconnector owner is compensated for a planned outage in the forwards timeframe, it will not be compensated again when that outage is considered in the day ahead capacity calculation process.

Title 4 – Fall back

The fall-back process is used if inputs for calculations are not available. The fall-back option for the July calculation is that 50% of FCC is allocated, subject to known outage periods, where no capacity is allocated in those outage periods, unless otherwise agreed by interconnector owners and relevant TSOs.

For the mid-year and final scenario-based analyses, 90% and 100% of FCC is allocated respectively, subject to known outage periods, where 0% of FCC is allocated unless otherwise agreed by interconnector owners and relevant TSOs.

Title 5 – Publication and Implementation

The calculations outlined in this methodology will commence in 2020 for delivery year 2021.

As parts of the methodology rely on the establishment of the Common Grid Model, which is not yet available, the fall-back processes will be used until such a time that the calculation inputs resulting from the Common Grid Model are available.